

VPDES PERMIT PROGRAM FACT SHEET

This document gives pertinent information concerning the VPDES Permit listed below. This permit is being processed as a MINOR, INDUSTRIAL permit. The effluent limitations contained in this permit will maintain the water quality standards of 9 VAC 25-260-00 et seq.

1. PERMIT NO.: VA0001627

EXISTING PERMIT

EXPIRATION DATE: December 3, 2008

2. FACILITY NAME AND LOCAL MAILING ADDRESS

FACILITY PHYSICAL LOCATION (IF DIFFERENT)

Corning, Inc. – Danville Plant
265 Corning Drive
Danville, Virginia 24541

FACILITY CONTACT:

NAME: Mr. Ralph M. Nuckols

TITLE: Environment and Safety Specialist

PHONE: (434) 797-6354

E-MAIL: NuckolsRM@Corning.com

ALTERNATE CONTACT:

NAME:

TITLE:

PHONE: ()

E-MAIL:

3. OWNER CONTACT: (TO RECEIVE PERMIT)

NAME: Peter J. Aagaard

TITLE: Plant Manager

COMPANY NAME: (IF DIFFERENT)

ADDRESS: 265 Corning Drive

Danville, Virginia 24541

PHONE: (434) 793-9511

E-MAIL: aagaardpj@corning.com

4. PERMIT DRAFTED BY: DEQ, Water Permits, South Central Regional Office

Permit Writer: Kirk A. Batsel

Date(s): 11/24/08, 12/12/08, 1/23/09

Reviewed By: Kip D. Foster

Date(s): 12/11/08

5. PERMIT CHARACTERIZATION: (Check as many as appropriate)

() Issuance

() Municipal

() POTW

(X) Reissuance

SIC Code(s) _____

() PVOTW

() Revoke & Reissue

() Private

() Owner Modification

(X) Industrial

() Federal

() Board Modification

SIC Code 3229

() State

() Change of Ownership/Name

Specialty Glass Manufacturing

() Publicly-Owned Industrial

Effective Date: _____

() Site-Specific WQ Criteria

() Interim Limits in Other Document (attach to fact sheet)

() Variance to WQ Standards

() Concept Engineering Report Being Approved with Permit

() Water Effects Ratio

() Possible Interstate Effect

6. APPLICATION COMPLETE DATE: June 13, 2008 (VDH comments received)

7. **RECEIVING WATERS CLASSIFICATION:** River basin information.

Outfall No(s): 001 and 901

Receiving Stream:	Rutledge Creek	7-Day/10-Year Low Flow:	0.006 MGD
River Mile:	3.54	7-Day/10-Year High Flow:	0.03 MGD
Basin:	Roanoke River	1-Day/10-Year Low Flow:	0.005 MGD
Subbasin:	Roanoke River	1-Day/10-Year High Flow:	0.026 MGD
Section:	3	30-Day/5-Year Low Flow:	0.021 MGD
Class:	III	30-Day/10-Year Low Flow:	0.009 MGD
Special Standard(s):	None	Harmonic Mean Flow:	0.071 MGD

8. **FACILITY DESCRIPTION:** Describe the type facility from which the discharges originate.

Existing industrial discharge resulting from the manufacturing of specialty glass materials such as blanks for projection televisions, various types of tubing, and cover slides for laboratory uses. Waste waters are generated from contact cooling, non-contact cooling, boiler blowdown, and storm water runoff associated with industrial activity.

9. **LICENSED WASTEWATER OPERATOR REQUIREMENTS:** (X) No () Yes Class:

10. **RELIABILITY CLASS:** Industrial Facility – NA

11. **SITE INSPECTION DATE:** July 27, 2007 **REPORT DATE:** August 15, 2007

Performed By: E. Mark Coppage, Senior Water Compliance Inspector

Only the first page of the inspection report is included. See the inspection file for a full copy of the report.

SEE ATTACHMENT 1

12. **DISCHARGE(S) LOCATION DESCRIPTION:** Provide USGS Topo which indicates the discharge location, significant (large) discharger(s) to the receiving stream, water intakes, and other items of interest.

Name of Topo: Danville

Quadrant No.: 015C

SEE ATTACHMENT 2

13. **ATTACH A SCHEMATIC OF THE WASTEWATER TREATMENT SYSTEM(S) [IND. & MUN.]. FOR INDUSTRIAL FACILITIES, ALSO PROVIDE A GENERAL DESCRIPTION OF THE PRODUCTION CYCLE(S) AND ACTIVITIES. FOR MUNICIPAL FACILITIES, PROVIDE A GENERAL DESCRIPTION OF THE TREATMENT PROVIDED.**

Narrative: Waste water generated at the plant includes, contact and non-contact cooling water, boiler blowdown, steam dryer condensate, outside washdown, misc. in-plant (wash, steam), tank and furnace cooling, and stormwater from industrial areas. These wastewater streams are combined in the facility's settling lagoon, which has an oil skimmer. The discharge from the lagoon is dechlorinated by injection of a sodium meta-bisulfite solution at the discharge conveyance. This waste stream then combines with additional industrial stormwater and passes through the facility's sampling and flow monitoring parshall flume prior to discharge via outfall 001 to Rutledge Creek.

SEE ATTACHMENT 3

14. **DISCHARGE DESCRIPTION:** Describe each discharge originating from this facility.

SEE ATTACHMENT 4

15. **COMBINED TOTAL FLOW:**

TOTAL: 0.272 MGD, Max 30-Day Value from Form 2C (for public notice)
0.666 MGD, Max Daily Value from Form 2C

PROCESS FLOW: 0.198 MGD (IND.) (Long Term Average from Form 2C)
NONPROCESS FLOW: 0.006 MGD Avg. (IND. STORMWATER – Rainfall Dependent)
DESIGN FLOW: MGD (MUN.)

16. **STATUTORY OR REGULATORY BASIS FOR EFFLUENT LIMITATIONS AND SPECIAL CONDITIONS:** (Check all which are appropriate)

- ☒ State Water Control Law
☒ Clean Water Act
☒ VPDES Permit Regulation (9 VAC 25-31-10 et seq.)
☒ EPA NPDES Regulation (Federal Register)
☐ EPA Effluent Guidelines [40 CFR 400 – 471 (industrial)]
☐ EPA Effluent Guidelines [40 CFR 133 (municipal 2^o treatment)]
☒ Water Quality Standards (9 VAC 25-260-00 et seq.)
☐ Waste load Allocation from a TMDL or River Basin Plan

17. **LIMITATIONS/MONITORING:** Include all effluent limitations and monitoring requirements being placed in the permit for each outfall, including any WET limits. If applicable, include any limitations and monitoring requirements being included for sludge and ground water.

There are no applicable limitations and monitoring requirements for sludge.

There are no applicable limitations and monitoring requirements for ground water at this time.

SEE ATTACHMENT 5

18. **SPECIAL CONDITIONS:** Provide all actual permit special conditions, including compliance schedules, toxic monitoring, sludge, ground water, storm water and pretreatment.

SEE ATTACHMENT 6

19. **EFFLUENT/SLUDGE/GROUND WATER LIMITATIONS/MONITORING RATIONALE:** For outfalls, attach any analyses completed (MIX.EXE and WLA.EXE) and STATS printouts for individual toxic parameters. As a minimum, it will include: waste load allocation (acute, chronic and human health); statistics summary (number of data values, quantification level, expected value, variance, covariance, 97th percentile, and statistical method); input data listing; and, effluent limitations determination. Include all calculations used for each outfall's set of effluent limits and incorporate the results of any water quality model(s). Include all calculations/documentation of any antidegradation or anti-backsliding issues in the development of any limitations; complete the review statements below. Provide a rationale for limited internal waste streams and indicator pollutants. Attach any additional information used to develop the limitations, including any applicable water quality standards calculations (acute, chronic and human health).

OTHER CONSIDERATIONS IN LIMITATIONS DEVELOPMENT:

WAIVERS/VARIANCES/ALTERNATE LIMITATIONS: Provide justification or refutation rationale for requested waivers to the permit application (e.g., testing requirements) or variances/alternatives to required permit conditions/limitations. This includes, but is not limited to: variances from technology guidelines or water quality standards; WER/translator study consideration; variances from standard permit limits/conditions.

N/A

SUITABLE DATA: What, if any, effluent data were considered in the establishment of effluent limitations and provide all appropriate information/calculations.

All suitable effluent data were reviewed.

ANTIDegradation REVIEW: Provide all appropriate information/calculations for the antidegradation review.

Tier I: X **Tier II:** **Tier III:**

The State Water Control Board's Water Quality Standards regulations include an antidegradation policy (9 VAC 25-260-30). All state surface waters are provided one of three levels of antidegradation protection. For Tier I, existing use protection, existing uses of the water body and the water quality to protect these uses must be maintained. Tier II water bodies have water quality that is better than the water quality standards. Significant lowering of the water quality of Tier II waters is not allowed without an evaluation of the economic and social impacts. Tier III water bodies are exceptional waters and are so designated by regulatory amendment. The antidegradation policy prohibits new or expanded discharges into exceptional waters.

The antidegradation review begins with the Tier determination. The facility discharges to Rutledge Creek. This receiving stream is not listed on the 303(d) list and no in-stream data are available that indicate the water quality criteria either have been violated or are barely met. However, the permit contains water quality-based limits for pH, Temperature, and Whole Effluent Toxicity (full allocation). Therefore, Rutledge Creek, at the point of this facility's discharge, is designated as Tier I and no further review is needed. Permit limits have been established by determining waste load allocations which will result in attaining and/or maintaining all water quality criteria which apply to the receiving stream, including narrative criteria. These waste load allocations will provide for the protection and maintenance of all existing uses.

ANTIBACKSLIDING REVIEW: Indicate if antibacksliding applies to this permit and, if so, provide all appropriate information.

There are no backsliding issues to address in this permit (i.e., limits as stringent or more stringent when compared to the previous permit).

SEE ATTACHMENT 7

20. **SPECIAL CONDITIONS RATIONALE:** Provide a rationale for each of the permit's special conditions, including compliance schedules, toxic monitoring, sludge, ground water, storm water and pretreatment.

SEE ATTACHMENT 8

21. **SLUDGE DISPOSAL PLAN:** Provide a brief description of the sludge disposal plan (e.g., type sludge, treatment provided and disposal method). Indicate if any of the plan elements are included within the permit.
N/A

22. **MATERIAL STORED:** List the type and quantity of wastes, fluids, or pollutants being stored at this facility. Briefly describe the storage facilities and list, if any, measures taken to prevent the stored material from reaching State waters.

SEE ATTACHMENT 9

23. **RECEIVING WATERS INFORMATION:** Refer to the State Water Control Board's Water Quality Standards [e.g., River Basin Section Tables (9 VAC 25-260 - Part IX) [along with Parts VII and VIII]]. Use 9 VAC 25-260-140 C (introduction and numbered paragraph) to address tidal waters where fresh water standards would be applied or transitional waters where the most stringent of fresh or salt water standards would be applied. Attach any memoranda or other information which helped to develop permit conditions (i.e. flow determination memo, tier determinations, PReP complaints, special water quality studies, STORET data and other biological and/or chemical data, etc.

SEE ATTACHMENT 10

24. **303(d) LISTED SEGMENTS:** Indicate if the facility discharges directly to a segment that is listed on the current 303(d) list, if the allocations are specified by an approved TMDL and, if so, provide all appropriate information/calculations. If the facility discharges directly to a stream segment that is on the current 303(d) list, the fact sheet must include a description of how the TMDL requirements are being met.

TMDLs are not included in this permit as the receiving waters are not listed on the 303(d) list.

- SEE ATTACHMENT 11**

- TOTAL SCORE: 60 SEE ATTACHMENT 12**

- SEE ATTACHMENT 13**

- The discharge is not addressed in any planning document.

- Persons may comment in writing or by e-mail to the DEQ on the proposed reissuance of the permit within 30 days from the date of the first notice. Address all comments to the contact person listed below. Written or e-mail comments shall include the name, address, and telephone number of the writer, and shall contain a complete, concise statement of the factual basis for comments. Only those comments received within this

period will be considered. The Director of the DEQ may decide to hold a public hearing if public response is significant. Requests for public hearings shall state the reason why a hearing is requested, the nature of the issues proposed to be raised in the public hearing and a brief explanation of how the requestor's interests would be directly and adversely affected by the proposed permit action.

All pertinent information is on file and may be inspected, and arrangements made for copying by contacting Kirk A. Batsel at: Department of Environmental Quality (DEQ), South Central Regional Office, 7705 Timberlake Road, Lynchburg, VA 24502. Telephone: 434-582-5120 E-mail: kabatsel@deq.virginia.gov

Following the comment period, the Board will make a determination regarding the proposed reissuance. This determination will become effective, unless the Director grants a public hearing. Due notice of any public hearing will be given.

30. **ADDITIONAL FACT SHEET COMMENTS/PERTINENT INFORMATION:**

The Lynchburg office was notified that the permittee was behind with their annual permit maintenance fee via email on 11/18/08. KAB called and spoke w/ Ralph Nuckols 11/20/08 who indicated that he had already been contacted by Carla Calhoun, a DEQ financial staff member, and that he had determined that the bill had somehow been overlooked in the corporate office. Once Ralph notified corporate, a check was expeditiously cut and mailed to DEQ. KAB confirmed with Carla that the check had been received by DEQ 11/21/08.

31. **SUMMARY OF SPECIFIC ATTACHMENTS LABELED AS:**

Attachment <u>1</u>	Site Inspection Report/Memorandum
Attachment <u>2</u>	Discharge Location/Topographic Map
Attachment <u>3</u>	Schematic/Plans & Specs/Site Map/Water Balance
Attachment <u>4</u>	Discharge/Outfall Description
Attachment <u>5</u>	Limitations/Monitoring
Attachment <u>6</u>	Special Conditions
Attachment <u>7</u>	Effluent/Sludge/Ground Water Limitations/Monitoring Rationale/Suitable Data/ Stream Modeling/Antidegradation/Antibacksliding
Attachment <u>8</u>	Special Conditions Rationale
Attachment <u>9</u>	Material Stored
Attachment <u>10</u>	Receiving Waters Info./Tier Determination/STORET Data
Attachment <u> </u>	303(d) Listed Segments
Attachment <u>11</u>	TABLE A and TABLE B - Change Sheets
Attachment <u>12</u>	NPDES Industrial Permit Rating Worksheet
Attachment <u>13</u>	EPA/Virginia Draft Permit Submission Checklist
Attachment <u>14</u>	Chronology Sheet
Attachment <u> </u>	

ATTACHMENT 1

SITE INSPECTION REPORT/MEMORANDUM



File
Copy

COMMONWEALTH of VIRGINIA

DEPARTMENT OF ENVIRONMENTAL QUALITY

SOUTH CENTRAL REGIONAL OFFICE

7705 Timberlake Road, Lynchburg, Virginia 24502

(434) 582-5120 Fax (434) 582-5125

www.deq.virginia.gov

L. Preston Bryant, Jr.
Secretary of Natural Resources

David K. Paylor
Director

Thomas L. Henderson
Regional Director

August 15, 2007

Mr. Ralph Nuckols
Corning Incorporated - Danville
265 Corning Drive
Danville, VA 24541

Re: Facility Inspection Report
Corning Incorporated - Danville - VPDES Permit Number VA0001627

Dear Mr. Nuckols:

For your review, I have enclosed the Facility Inspection Report for the inspection, which took place on July 27, 2007. Please read the report, giving special attention to the comments and recommendations.

On the day of the inspection the overall condition of the treatment works appeared to be good. The lagoon, the oil/water skimmers, the de-chlorinating unit, the flow measurement device, the sampling equipment, the parshall flume, and the outfall structure appeared to be well maintained and in good working order.

I would like to thank you for your time, assistance, and cooperation during the inspection. I would also like to thank you for providing me with the documentation, which I requested.

If you have any questions regarding the Technical report, please feel free to contact me at the above address, by telephone (434) 582-6211, or by e-mail emcoppage@deq.virginia.gov.

Sincerely,

A handwritten signature in cursive script that reads "E. Mark Coppage".

E. Mark Coppage
Senior Water Compliance Inspector

Enclosure

cc: DEQ/OWPP: Steve Stell
DEQ/SCRO: File

**VIRGINIA DEPARTMENT OF ENVIRONMENTAL QUALITY
SOUTH CENTRAL REGIONAL OFFICE
FACILITY INSPECTION REPORT**

FACILITY NAME: Corning Incorporated - Danville
FACILITY ADDRESS: 265 Corning Drive
Danville, VA 24541
INSPECTOR: E. Mark Coppage
INSPECTION DATE: 7/27/07
REPORT REVIEWED BY: Fred T. DiLella, DEQ/SCRO
PRESENT AT INSPECTION: Ralph M. Nuckols - Corning Incorporated

VPDES NUMBER: VA0001627

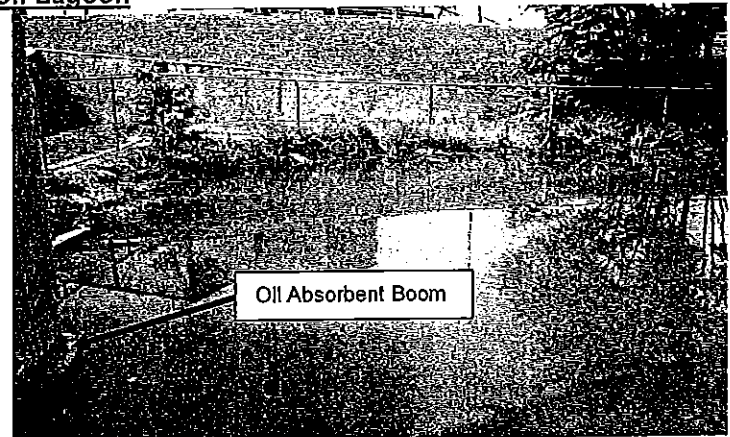
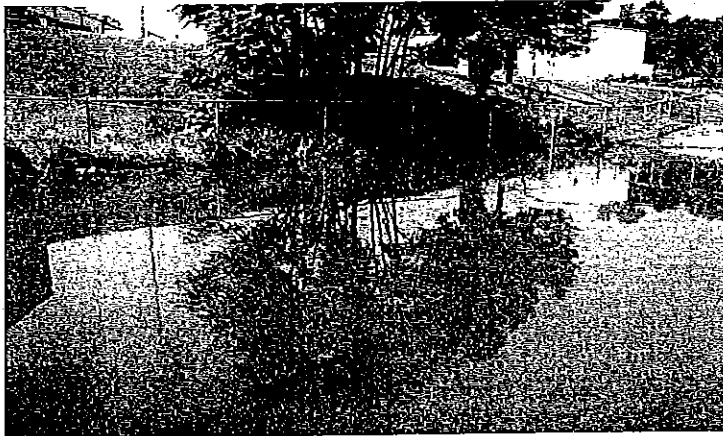
REPORT COMPLETED: 8/15/07

UNIT REVIEW:

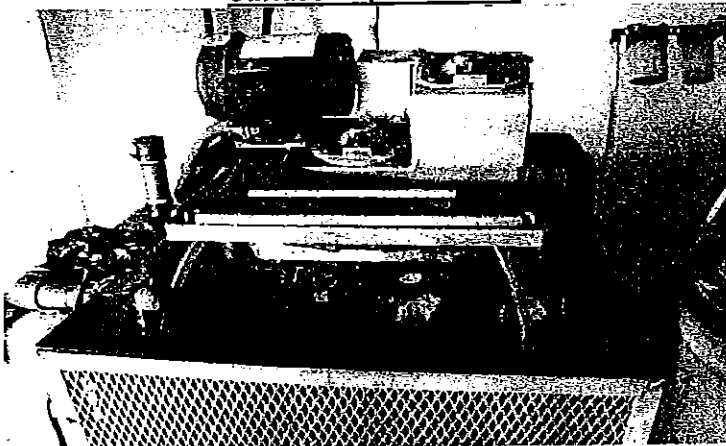
Lagoon:

1. The facility's wastewater treatment works has 1 lagoon, which is on the eastern end of the Corning Incorporated property.
2. The lagoon receives process water from the plant, as well as storm water. The lagoon mainly serves as a settling pond.
3. On the day of the inspection the lagoon waters had no distinctive color.
4. On the day of the inspection the waters were clear enough to see the bottom.
5. On the day of the inspection the lagoon had no duckweed or algae.
6. The staff has placed riprap on the banks of the lagoon.
7. The lagoon also has the capacity to remove oil by means of absorbing booms and a surface rope-skimmer.
8. On the day of the inspection the lagoon appeared to be well maintained and in good condition.
9. The effluent from the lagoon flows through a 21-inch parshall flume to the outfall.
10. The staff obtains samples after de-chlorination at the flume with a refrigerated ISCO Sampler.
11. On the day of the inspection the refrigerated ISCO sampler had a thermometer, which read 4°C.

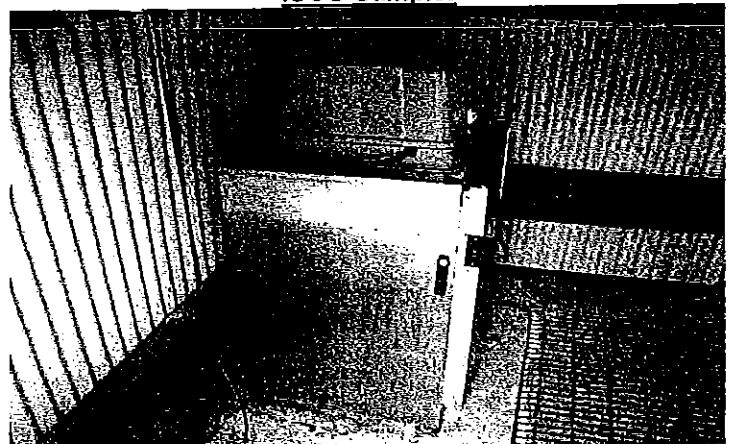
Sedimentation Lagoon



Surface Rope Skimmer



ISCO Sampler

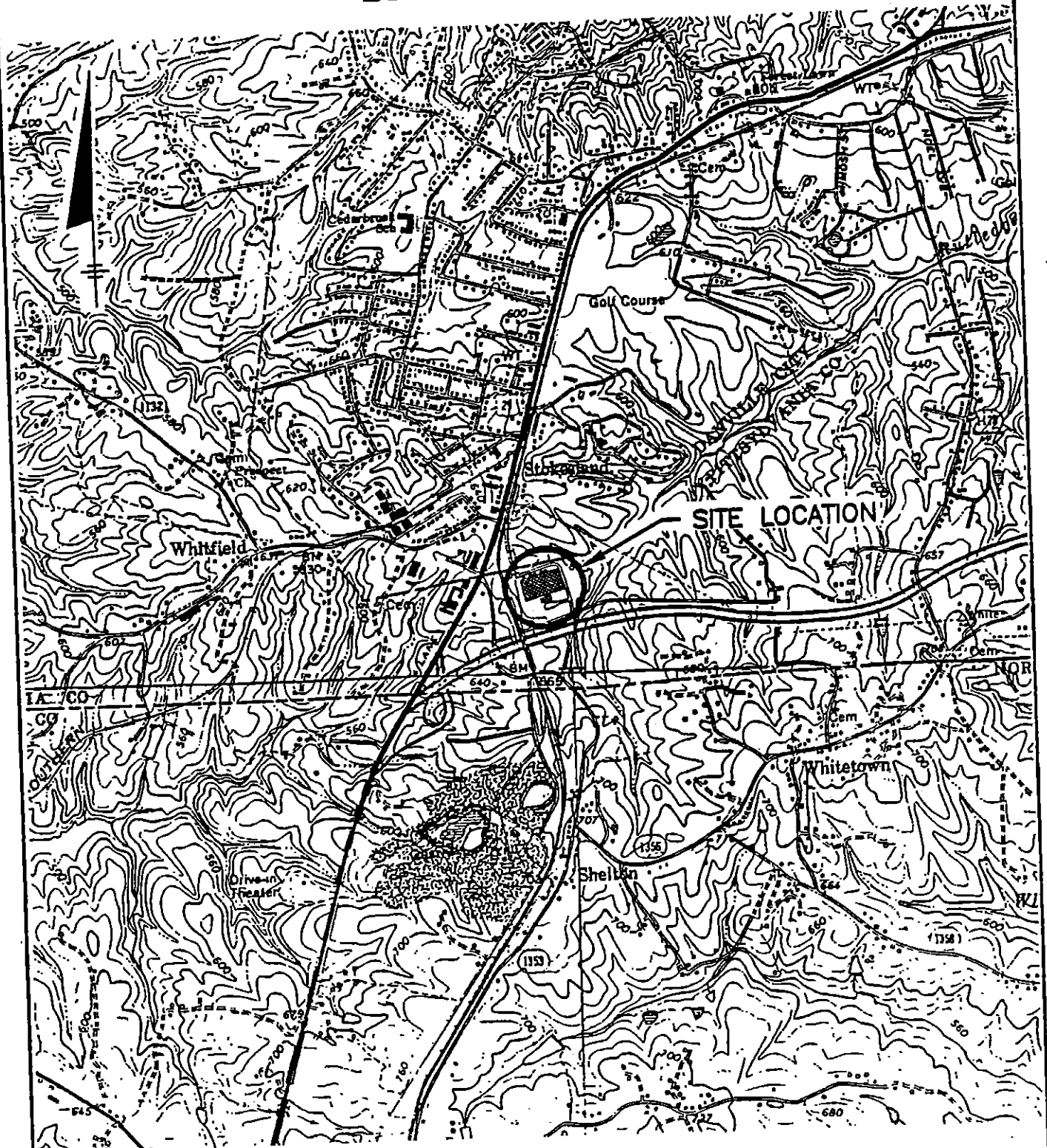


ATTACHMENT 2

DISCHARGE LOCATION/TOPOGRAPHIC MAP

FIGURE 1

CORNING INCORPORATED DANVILLE, VIRGINIA LOCATION MAP



2000 0 2000 4000
1" = 2000'

BY USGS DANVILLE, VA - N.C. DMA 5157 III SW-SERIES V834 1984

FILE No. 1403.120-01F

Approx. boundary line - Corning

O'BRIEN & GERE
ENGINEERS & ARCHITECTS

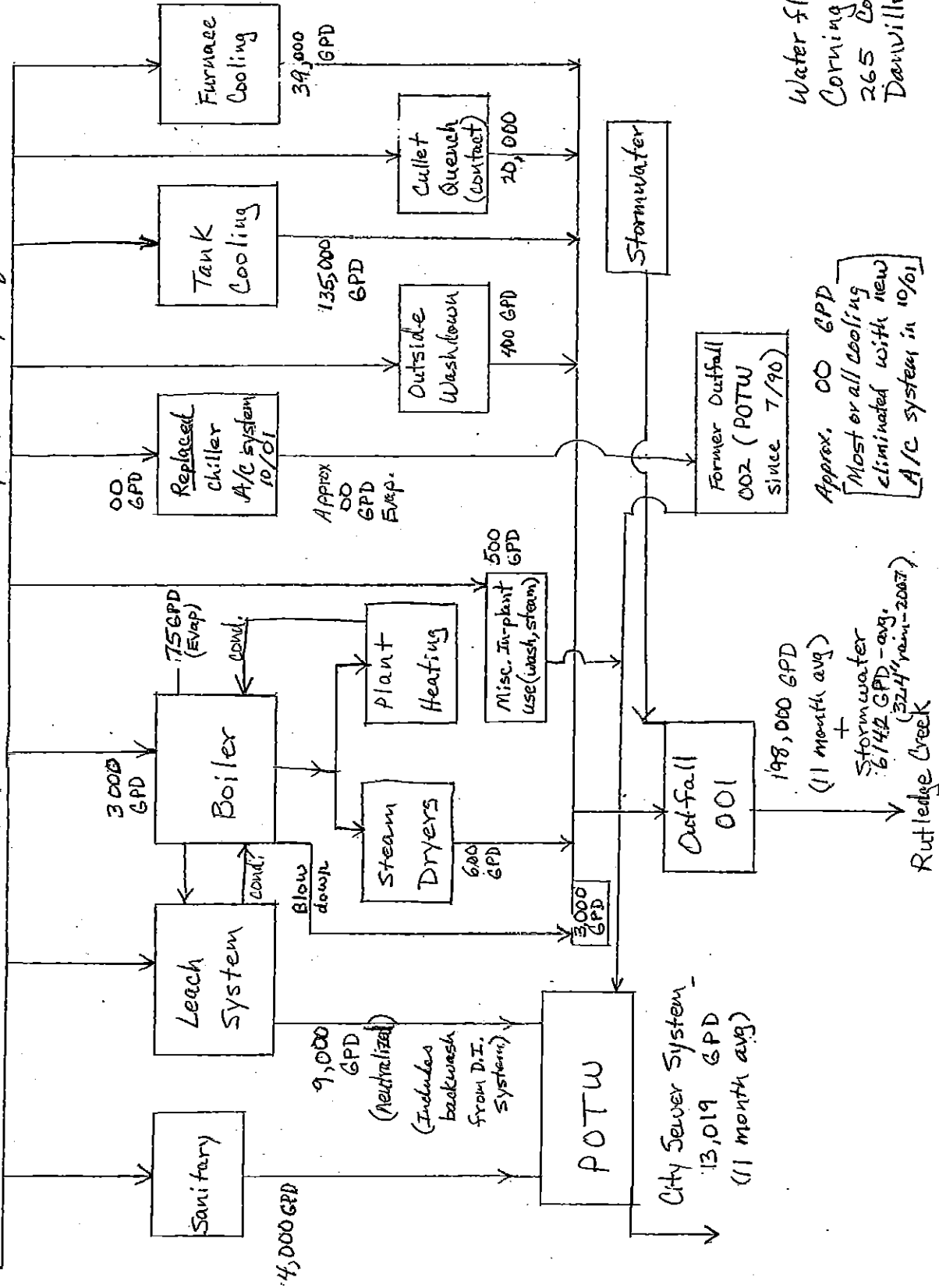
ATTACHMENT 3

SCHEMATIC/PLANS & SPECS/SITE MAP/
WATER BALANCE

(based on 2007 data)
(1/1 → 12/1/07)

Water Supply

Municipal: City of Danville



Water flow schematic
Corning, Inc.
265 Corning Dr.
Danville, Va. 24541

ATTACHMENT 4

DISCHARGE/OUTFALL DESCRIPTION

TABLE I
NUMBER AND DESCRIPTION OF OUTFALLS

OUTFALL NO.	DISCHARGE LOCATION	DISCHARGE SOURCE (1)	TREATMENT (2)	FLOW (MGD) (3)
001	36°32'34" -79°27'32"	Contact and non-contact cooling water, boiler blow down condensate, steam dryer condensate, outside wash down, misc. in-plant (wash, steam), tank and furnace cooling, and stormwater from industrial areas	Settling lagoon (12 hour detention) with an oil skimmer. The discharge from the lagoon is dechlorinated by injection of a sodium meta-bisulfite solution at the discharge point from the lagoon. The lagoon discharge then combines with stormwater prior to the parshall flume where sampling/monitoring occurs. The combined discharge is then discharged via outfall 001 to Rutledge Creek.	0.272 Max 30-Day value 0.666 Max Daily Value (Source – Form 2C)
901	36°32'34" -79°27'32"	Stormwater from industrial areas	Site-BMPs	Max 0.006 MGD

- (1) List operations contributing to flow
- (2) Give brief description, unit by unit
- (3) Give maximum 30-day average flow for industry and design flow for municipal

ATTACHMENT 5

LIMITATIONS/MONITORING

INDUSTRIAL EFFLUENT LIMITATIONS/MONITORING

OUTFALL # 001

Outfall Description: Dry weather flow - contact and non-contact cooling water, boiler blowdown, steam dryer condensate, outside washdown, misc. in-plant (wash, steam), tank and furnace cooling, and stormwater from industrial areas.

SIC CODE: 3229 NAICS CODE: 327212

(X) Final Limits () Interim Limits

Effective Dates - From: Permit Effective date

To: Permit expiration date

EFFLUENT CHARACTERISTICS	DISCHARGE LIMITATIONS				MONITORING REQUIREMENTS	
	MONTHLY AVERAGE		MINIMUM	MAXIMUM		FREQUENCY
	mg/l*	lb/day	mg/l	mg/l*	lb/day	
Flow (MGD)	NL		NA	NL		1/Week
pH (standard units)	NA		6.0	9.0		2/Month
Total Suspended Solids [a]	NL	55.1	NA	NL	110.2	1/3 Months
Total Residual Chlorine [b]	0.011	NA	NA	0.016	NA	1/Week
TPH [a]	10	NA	NA	15	NA	1/3 Months
Temperature (°C)	NA		NA	32		1/Week
Total Iron [a][b]	NL	3.0	NA	NL	5.9	1/3 Months
Total Lead [a][b][c]	NL	0.19	NA	NL	0.39	1/3 Months
Total Boron [b]	NL	NA	NA	NL	NA	1/Year
Total Nitrogen [b]	NL	NA	NA	NL	NA	1/Year
Total Nitrate [b]	NL	NA	NA	NL	NA	1/Year
Total Nitrite [b]	NL	NA	NA	NL	NA	1/Year
Dissolved Lead (µg/l) [a][b]	NL	NA	NA	NL	NA	1/Year
Total Recoverable Zinc (µg/l) [a][b][c][d]	51	NA	NA	51	NA	1/Year
Acute Whole Effluent Toxicity (NOAEC) [e]	NA	NA	100%	NA	NA	1/6 Months
						24-HC

* = UNLESS OTHERWISE NOTED; NA = NOT APPLICABLE; NL = NO LIMIT, MONITORING REQUIREMENT ONLY

1/3 Months = In accordance with the following schedule: 1st quarter (January 1 - March 31, due April 10); 2nd quarter (April 1 - June 30, due July 10); 3rd quarter (July 1 - September 30, due October 10); 4th quarter (October 1 - December 31, due January 10).

1/6 Months = In accordance with the following schedule: 1st half (January 1 - June 30, due July 10); 2nd half (July 1 - December 31, due January 10).

1/Year = Between January 1 and December 31, due January 10 of following year.

[a] See Part I.D.7. for additional instructions regarding effluent monitoring frequencies.

[b] See Parts I.D.5.a. and I.D.5.b. for quantification levels and reporting requirements, respectively.

[c] Any violation of the maximum daily discharge limitation shall be reported in accordance with Part II, section I. of this permit.

[d] See Part I.C. for Schedule of Compliance. No monitoring or reporting required until after completion of the schedule.

[e] The NOAEC acute WET test shall be reported as = 100% if there exists no significant difference between the 100% effluent and the control test concentrations as determined by hypothesis testing. A test result = 100% is considered a pass (no toxicity demonstrated). If the 100% concentration results in a significant difference from the control, the result shall be reported as <100%, and the test is considered a fail (demonstrated toxicity).

There shall be no discharge of floating solids or visible foam in other than trace amounts.

BASES FOR LIMITATIONS/MONITORING:

PARAMETER	MULTIPLIER OR PRODUCTION	TECHNOLOGY	WATER QUALITY	BEST PROFESSIONAL JUDGMENT
Flow				X
pH (SU), TRC (mg/l), Temperature (°C), and Acute WET (NOAEC=100%)			X	
TSS (lbs/day)*, TPH (mg/l), Total Iron (lbs/day)*, and Total lead (lbs/day)*				X
Total Boron (mg/l), Total Nitrogen (mg/l), Total Nitrate (mg/l), and Total Nitrite (mg/l)				X
Dissolved Lead (µg/l) & Total Recoverable Zinc (µg/l)			X	

* TSS, Total Iron, and Total Lead mass loading originally included in 1st permit issued by EPA. These limits will be carried forward w/ reissuance.

STORM WATER EFFLUENT LIMITATIONS/MONITORING

OUTFALL # 901

Outfall Description: Wet weather flow for outfall 001 (commingled storm water from regulated SIC code industrial activity areas & process water).
 SIC CODE: 3229 NAICS CODE: 327212 Other Pressed and Blown Glass and Glassware Manufacturing

(X) Final Limits () Interim Limits		Effective Dates - From: Permit Effective date		To: Permit expiration date	
EFFLUENT CHARACTERISTICS	DISCHARGE LIMITATIONS	MONITORING REQUIREMENTS [a]			
		MINIMUM mg/l*	MAXIMUM mg/l*	FREQUENCY	SAMPLE TYPE
Flow (MGD)	NA	NL	NL	1/Year	Estimated [a]
pH (standard units)	6.0	9.0		1/Year	Grab
Total Suspended Solids	NA	NL		1/Year	Grab
TPH	NA	NL		1/Year	Grab
Dissolved Lead (µg/l) [b]	NA	NL		1/Year	Grab
Dissolved Zinc (µg/l)	NA	NL		1/3 Months	Grab

* = UNLESS OTHERWISE NOTED NA = NOT APPLICABLE NL = NO LIMIT, MONITORING REQUIREMENT ONLY

1/3 Months = In accordance with the following schedule: 1st quarter (January 1 - March 31, due April 10); 2nd quarter (April 1 - June 30, due July 10); 3rd quarter (July 1 - September 30, due October 10); 4th quarter (October 1 - December 31, due January 10).

1/Year = Between January 1 and December 31, due January 10 of following year.

[a] Monitoring shall be conducted within the first 30 minutes of a qualifying precipitation event, starting from the time runoff commingles with outfall 001. In addition to the analytical results, the permittee shall provide: (1) the date and duration (in hours) of the storm event(s) sampled; (2) rainfall measurements or estimates (in inches) of the storm event that generated the sampled runoff; (3) the duration between the storm event sampled and the end of the previous measurable (greater than 0.1 inch rainfall) storm event; and, (4) a monthly log documenting the amount of rainfall received at the facility on a daily basis. See Part I.E.1.a. and b. (General Storm Water Conditions).

[b] Monitoring for lead shall coincide with the use of lead in the production process when possible.

The effectiveness of the SWPPP will be evaluated via the required monitoring for all parameters listed for outfall 901 above. Monitoring results showing high values, especially for dissolved lead and dissolved zinc, will not indicate unacceptable values. However, those results will justify the need to reexamine the effectiveness of the SWPPP and any Best Management Practices (BMPs) being utilized for this outfall.

There shall be no discharge of floating solids or visible foam in other than trace amounts.

BASES FOR LIMITATIONS/MONITORING:

PARAMETER	INDUSTRIAL STORM WATER CATEGORY	TECHNOLOGY	WATER QUALITY	BEST PROFESSIONAL JUDGMENT
Flow	Glass, Clay, Cement, Concrete & Gypsum Products			X
TSS, TPH, dissolved zinc, and dissolved lead	Glass, Clay, Cement, Concrete & Gypsum Products			X
pH			X	

STORM WATER CATEGORIES:

(1) Timber Products	(14) Steam Electric Power Generating, Inc. Coal Handling Areas	(21) Textile Mills, Apparel & Other Fabric Products Mfg.
(2) Paper & Allied Products	(15) Motor Freight, Passenger, Rail, U.S. Postal Transportation & Petroleum Bulk Oil Stations and Terminals	(22) Wood & Metal Furniture and Fixture Mfg.
(3) Chemical & Allied Products	(16) Water Transportation With Maintenance and/or Equipment Cleaning	(23) Printing & Publishing
(4) Asphalt Paving/Roofing Materials & Lubricant	(17) Ship/Boat Building or Repairing	(24) Rubber, Miscellaneous Plastic Products & Miscellaneous Mfg.
(5) Glass, Clay, Cement, Concrete & Gypsum Products	(18) Vehicle Maintenance, Equipment Cleaning or Deicing Areas At Air Transportation Facilities	(25) Leather Tanning & Finishing
(6) Primary Metals	(19) Treatment Works	(26) Fabricated Metal Products
(7) Metal Mining (Ore Mining & Dressing)	(20) Food & Kindred Products	(27) Transportation Equipment, Industrial Or Commercial Machinery Mfg.
(8) Coal Mines & Coal Mining Related		(28) Electronic & Electrical Equipment and Components, Photographic & Optical Goods Mfg.
(9) Oil & Gas Extraction & Petroleum Refineries		(29) Nonclassified Facilities
(10) Hazardous Waste Treatment, Storage, Disposal		
(11) Landfills, Land Application Sites & Open Dumps		
(12) Automobile Salvage Yards		
(13) Scrap/Waste Recycling		

ATTACHMENT 6

SPECIAL CONDITIONS

VPDES PERMIT PROGRAM
LIST OF SPECIAL CONDITIONS

B. WHOLE EFFLUENT TOXICITY (WET) LIMITATION MONITORING REQUIREMENTS FOR OUTFALL 001.

1. The Whole Effluent Toxicity limitation of NOAEC = 100% effluent in Part I.A. is a final limit.
2. The permittee shall conduct semiannual acute toxicity tests using 24-hour flow-proportioned composite samples of final effluent from outfall 001. Effluent samples shall be collected during a non-storm event. When applicable, semiannual samples taken for WET testing purposes shall coincide with Part I.A. chemical sampling. The test species shall be alternated each semiannual period. WET test semiannual periods correspond with the semiannual schedule defined in Part I.A. of this permit. The acute tests to use are:

48 Hour Static Acute Test using *Ceriodaphnia dubia*

48 Hour Static Acute Test using *Pimephales promelas*

These acute tests are to be conducted using a minimum of 4 replicates, with 5 organisms each, for the control and 100% effluent. The NOAEC (No Observed Adverse Effect Concentration) shall be reported as either 100% or <100% (less than 100%). The effluent will be in compliance if the survival of the test organisms in both the control and 100% effluent exposures equals or exceeds 90%. If the survival in the effluent is less than 90% and this value is significantly different from the control survival, as determined by hypothesis testing, the NOAEC is less than 100% and the effluent is not in compliance. Tests in which control survival is less than 90% are not acceptable.

One copy of the toxicity test results shall be submitted with the DMR. Test procedures and reporting shall be in accordance with the WET testing methods cited in 40 CFR 136.3

3. The permit may be modified or revoked and reissued to include pollutant specific limits in lieu of a WET limit should it be demonstrated that toxicity is due to specific parameters. The pollutant specific limits must control the toxicity of the effluent.
4. All semiannual WET test monitoring shall be in accordance with the following schedule:

Semiannual Monitoring Window	Test Report Due Date
January 1 – June 30	July 10
July 1 - December 31	January 10

C. SCHEDULE OF COMPLIANCE

The permittee shall achieve compliance with the final limitations and monitoring requirements for Total Recoverable Zinc as specified in Part I.A. of this permit in accordance with the following schedule:

1. Submit Proposed Plan for Achievement of Compliance or Select a Design Engineer **No later than July 10, 2009**
2. Submit Progress Reports to the DEQ Regional Office **Quarterly after #1, with the first report due October 10, 2009.**
3. Achieve Compliance with Part I.A. Limitations **No later than July 1, 2013**

Quarterly = In accordance with the following schedule: 1st quarter (January 1 - March 31, due April 10); 2nd quarter (April 1 - June 30, due July 10); 3rd quarter (July 1 - September 30, due October 10); 4th quarter (October 1 - December 31, due January 10).

No later than 14 calendar days following a date identified in the above schedule of compliance, the permittee shall submit to the DEQ Regional Office, either a report of progress or, in the case of specific actions being required by identified dates, a written notice of compliance or noncompliance. In the latter case, the notice shall include the cause of noncompliance, any remedial actions taken, and the probability of meeting the next scheduled requirement.

D. OTHER REQUIREMENTS OR SPECIAL CONDITIONS

1. Water Quality Criteria Reopener

Should effluent monitoring indicate the need for any water quality-based limitation, this permit may be modified or, alternatively, revoked and reissued to incorporate appropriate limitations.

2. Licensed Wastewater Operator Requirement

No licensed wastewater works operator is required at this permitted facility.

3. Operations and Maintenance (O & M) Manual

The permittee shall review the existing O & M Manual and notify the DEQ Regional Office, in writing, that it is still accurate and complete. If the O & M Manual is no longer accurate and complete, a revised O & M Manual shall be submitted for approval to the DEQ Regional Office. The permittee shall maintain an accurate, approved O & M Manual for the treatment works and operate the treatment works in accordance with the approved O & M manual. This manual shall include, but not necessarily be limited to, the following items, as appropriate:

- a. Treatment works design and operation, routine preventative maintenance of units within the treatment system, critical spare parts inventory and record keeping;
- b. Procedures for measuring and recording the duration and volume of treated wastewater discharged;
- c. Techniques to be employed in the collection, preservation and analysis of effluent samples;
- d. Procedures for handling, storing, and disposing of all wastes, fluids, and pollutants characterized in Part I.C.6. (Materials Handling and Storage) that will prevent these materials from reaching state waters; and,
- e. A plan for the management and/or disposal of waste solids and residues.
- f. Discussion of Best Management Practices.

Any changes in the practices and procedures followed by the permittee shall be documented and submitted for approval within 90 days of the effective date of the changes. Upon approval of the submitted manual changes, the revised manual becomes an enforceable part of this permit. Noncompliance with the O & M Manual shall be deemed a violation of the permit.

Letter/Revised Manual Due: No later than April 10, 2009

4 Notification Levels

The permittee shall notify the Department as soon as they know or have reason to believe:

- a. That any activity has occurred or will occur which would result in the discharge, on a routine or frequent basis, of any toxic pollutant which is not limited in this permit, if that discharge will exceed the highest of the following notification levels:
 - (1) One hundred micrograms per liter (100 ug/l);
 - (2) Two hundred micrograms per liter (200 ug/l) for acrolein and acrylonitrile; five hundred micrograms per liter (500 ug/l) for 2,4-dinitrophenol and for 2-methyl-4,6-dinitrophenol; and one milligram per liter (1 mg/l) for antimony;
 - (3) Five (5) times the maximum concentration value reported for that pollutant in the permit application; or
 - (4) The level established by the Board.
- b. That any activity has occurred or will occur which would result in any discharge, on a non-routine or infrequent basis, of a toxic pollutant which is not limited in this permit, if that discharge will exceed the highest of the following notification levels:
 - (1) Five hundred micrograms per liter (500 ug/l);
 - (2) One milligram per liter (1 mg/l) for antimony;
 - (3) Ten (10) times the maximum concentration value reported for that pollutant in the permit application.
 - (4) The level established by the Board.

5. Compliance Reporting Under Part I.A.

a. Quantification Levels

- (1) Maximum quantification levels (QL) shall be as follows:

<u>Effluent Characteristic</u>	<u>Quantification Level</u>
Total Boron	0.10 mg/l
Chlorine	0.10 mg/l
Total Nitrogen	0.50 mg/l
Total Nitrate	0.50 mg/l
Total Nitrite	0.50 mg/l
Lead	1.0 µg/l
Zinc	20.0 µg/l

- (2) The permittee may use any approved method which has a QL equal to or lower than the QL listed in a.(1) above. The QL is defined as the lowest concentration used to calibrate a measurement system in accordance with the procedures published for the method.
- (3) It is the responsibility of the permittee to ensure that proper QA/QC protocols are followed during the sampling and analytical procedures. QA/QC information shall be documented to confirm that appropriate analytical procedures have been used and the required QLs have been attained.

- (4) An appropriate analytic method for metals shall be selected from the following list of EPA methods, or any approved method in 40 CFR Part 136, which will achieve a QL that is less than or equal to the QL specified in a.(1) above.

<u>Metal</u>	<u>Analytical Methods</u>
Lead	239.1; 200.7; 239.2; 200.9; 200.8; 1638; 1637; 1640
Zinc	289.1; 200.7; 1638; 1639; 200.8; 289.2

b. Reporting

- (1) **Monthly Average** -- Compliance with the monthly average limitations and/or reporting requirements for the parameters listed in a.(1) above shall be determined as follows: All concentration data below the test method QL shall be treated as zeros. All concentration data equal to or above the QL shall be treated as reported. An arithmetic average shall be calculated using all reported data for the month, including the defined zeros. This arithmetic average shall be reported on the DMR as calculated. If all data are below the QL, then the average shall be reported as "<QL". If reporting for quantity is required on the DMR and the calculated concentration is <QL, then report "<QL" for the quantity; otherwise, use the calculated concentration to calculate the quantity.
- (2) **Daily maximum** -- Compliance with the daily maximum limitations and/or reporting requirements for the parameters listed in a.(1) above shall be determined as follows: All concentration data below the test method QL shall be treated as zeros. All concentration data equal to or above the QL shall be treated as reported. An arithmetic average of the values shall be calculated using all reported data, including the defined zeros, collected within each day during the reporting month. The maximum value of these daily averages thus determined shall be reported on the DMR as the Daily Maximum. If all data for each daily maximum are below the QL, then the average shall be reported as <[QL]. If reporting for quantity is required on the DMR and the calculated concentration for each daily average is <QL, then report "<QL" for the quantity; otherwise, use the calculated maximum value of the daily averages to calculate the quantity.
- (3) Any single datum required shall be reported as "<QL" if it is less than the test method QL listed in a.(1) above. Otherwise, the numerical value shall be reported.
- (4) Monitoring results reported on the DMR shall be reported to the accuracy of the test, which must be capable of at least the same number of significant digits as the permit limit for the given parameter. Rounding the results to the number of significant digits in the permit, where the test method is sensitive enough to report more, is not acceptable and shall not be allowed. If there is not a method allowed by the permit that is accurate enough to measure two significant digits below the value of 1.0, it shall be the permittee's responsibility to provide documentation for DEQ approval demonstrating that only one significant figure can accurately be reported.

6. Materials Handling and Storage

Any and all product, materials, industrial wastes, and/or other wastes resulting from the purchase, sale, mining, extraction, transport, preparation and/or storage of raw or intermediate materials, final product, by-product or wastes, shall be handled, disposed of and/or stored in such a manner so as not to permit a discharge of such product, materials, industrial wastes and/or other wastes to State waters; except as expressly authorized.

7. Effluent Monitoring Frequencies

If the facility permitted herein is issued a Notice of Violation for any of the parameters listed below, then the following effluent monitoring frequencies shall become effective upon written notice from DEQ and remain in effect until permit expiration date.

<u>Effluent Parameter</u>	<u>Frequency</u>
TSS	1/Month
TPH	1/Month
Total Iron	1/Month
Total Lead	1/Month

No other effluent limitations or monitoring requirements are affected by this special condition.

8. Cooling Water and Boiler Additives

- a. If at any time during the life of this permit, the permittee decides to treat any non-contact cooling water unit(s) and/or boiler system(s) with chemical additives [other than those additives currently in use and on file with the DEQ Regional Office], the following requirements shall be satisfied.

At least thirty (30) days prior to implementing any chemical addition to the cooling water and/or boiler equipment, the permittee shall notify the DEQ Regional Office, in writing, of the following:

- (1) The chemical additives to be employed and their purpose. Provide to the staff for review, a Material Safety Data Sheet (MSDS) for each proposed additive;
- (2) Schedule of additive usage; and,
- (3) Wastewater treatment and/or retention to be provided during the use of additives.

- b. Should the addition of treatment chemicals significantly alter the characteristics of the effluent from the cooling water and/or boiler unit(s) or their usage becomes persistent or continuous, this permit shall be modified or, alternatively, revoked and reissued to include appropriate limitations or conditions.

9. Minimum Freeboard

The permittee shall ensure that all basins or lagoons maintain a minimum freeboard of one (1) foot at all times. Should the one-foot freeboard not be maintained, the permittee shall immediately notify the DEQ Regional Office, describing the problem and corrective measures taken to correct the problem. Within 5 days of the notification, the permittee shall submit a written statement of explanation and corrective measures taken.

10. Hydrostatic Testing

The permittee shall obtain approval from the DEQ Regional Office forty-eight (48) hours in advance of any discharge resulting from hydrostatic testing. The conditions of approval will be contingent on the volume and duration of the proposed discharge, the nature of the residual product. Sampling will be required for characterization of the "first flush", as a minimum.

Report results with the DMR for the month in which sampling and hydrostatic testing occurred.

11. Permit Application Requirement

In accordance with Part II. M. of this permit, a new and complete permit application shall be submitted for the reissuance of this permit.

Application Due: No later than September 11, 2013

E. TOXICS MANAGEMENT PROGRAM

1. Biological Monitoring:

- a. In accordance with the schedule in 4. below, the permittee shall conduct chronic toxicity tests for the duration of the permit. The permittee should collect 24-hour flow-proportioned composite samples of final effluent from outfall 001. Effluent samples shall be collected during a non-storm event. When applicable, quarterly samples taken for WET testing purposes shall coincide with Part I.A. chemical sampling. The test species shall be alternated each year. The chronic tests to use are:

Chronic 3-Brood Static Renewal Survival and Reproduction Test using *Ceriodaphnia dubia*
Chronic 7-Day Static Renewal Survival and Growth Test using *Pimephales promelas*

These chronic tests shall be conducted in such a manner and at sufficient dilutions (minimum of five dilutions, derived geometrically) to determine the "No Observed Effect Concentration" (NOEC) for survival and reproduction or growth. Results which cannot be determined (i.e., a "less than" NOEC value) are not acceptable, and a retest will have to be performed. Express the test NOEC as TU_c (Chronic Toxic Units), by dividing $100/NOEC$ for DMR reporting. Report the LC_{50} at 48 hours and the IC_{25} with the NOEC's in the test report.

The permittee may provide additional samples to address data variability during the period of initial data generation. These data shall be reported and may be included in the evaluation of effluent toxicity. Test procedures and reporting shall be in accordance with the WET testing methods cited in 40 CFR 136.3

- b. The test dilutions should be able to determine compliance with the following endpoints:
 - (1) Chronic NOEC of 99% equivalent to a TU_c of 1.01
- c. The test data will be evaluated by WLA.EXE for reasonable potential at the conclusion of the test period. The data may be evaluated sooner if requested by the permittee, or if toxicity has been noted. Should evaluation of the data indicate that a limit is needed, a WET limit and compliance schedule will be required and the toxicity tests of 1.a. may be discontinued.

2. Wet Weather Biological Monitoring (Outfall 901):

- a. In accordance with the schedule in 4. below, the permittee shall conduct wet weather acute toxicity tests for the duration of the permit. Effluent samples shall be collected as in Part I.E.1.a. When possible, samples taken for outfall 901 toxicity testing purposes shall coincide with Part I.A. chemical sampling. The acute test shall be a 48 Hour Static Acute test using *Ceriodaphnia dubia*. These acute tests shall be performed with a minimum of 5 dilutions, derived geometrically, for calculation of a valid LC_{50} . Express the results as TU_a (Acute Toxic Units) by dividing $100/LC_{50}$ for reporting.
- b. Should any wet weather acute test result in a calculable LC_{50} value, the permittee shall review the facility's Stormwater Pollution Prevention Plan and implement any necessary facility initiatives. A second wet weather acute toxicity test shall be conducted within six months from the test date which resulted in the calculable LC_{50} value.
- c. The permittee shall submit the following information with the results of the toxicity tests:
 - (1) An actual measurement or estimate of the effluent flow at the time of sampling.
 - (2) The time the storm event began, the time the effluent was sampled, and the duration of the storm event.
 - (3) The duration between the storm event sampled and the end of the previous storm event.

3. The permittee may provide additional samples to address data variability. These data shall be reported and may be included in the evaluation of effluent toxicity. Test procedures and reporting shall be in accordance with the WET testing methods cited in 40 CFR 136.3
4. Reporting Schedule:

The permittee shall report the results on the DMR and supply 1 copy of the toxicity test reports specified in this Toxics Management Program in accordance with the following schedule:

Test Period	Monitoring Window	Test Report Due Date
1st	January 1 – December 31, 2009	January 20, 2010
2nd	January 1 – December 31, 2010	January 20, 2011
3rd	January 1 – December 31, 2011	January 20, 2012
4th	January 1 – December 31, 2012	January 20, 2013
5th	January 1 – Application Due date 2013	With VPDES application

F. STORM WATER MANAGEMENT CONDITIONS

1. General Storm Water Conditions

a. Sample Type

For all storm water monitoring required in Part I.A. or other applicable sections of this permit, a minimum of one grab sample shall be taken. Unless otherwise specified, all such samples shall be collected from the discharge resulting from a storm event that is greater than 0.1 inches in magnitude and that occurs at least 72 hours from the previously measurable (greater than 0.1 inch rainfall) storm event. The required 72-hour storm event interval is waived where the preceding measurable storm event did not result in a measurable discharge from the facility. The required 72-hour storm event interval may also be waived where the permittee documents that less than a 72-hour interval is representative for local storm events during the season when sampling is being conducted. The grab sample shall be taken during the first 30 minutes of the discharge, starting from the time it commingles with outfall 001. If the collection of a grab sample during the first 30 minutes is impracticable, a grab sample can be taken during the first hour of the discharge, and the permittee shall submit with the monitoring report a description of why a grab sample during the first 30 minutes was impracticable. If storm water discharges associated with industrial activity commingle with process or non-process water, then where practicable permittees must attempt to sample the storm water discharge before it mixes with the non-storm water discharge.

b. Recording of Results

For each measurement or sample taken pursuant to the storm event monitoring requirements of this permit, the permittee shall record and report with the Discharge Monitoring Reports (DMRs) the following:

- (1) The date and duration (in hours) of the storm event(s) sampled;
- (2) The rainfall measurements or estimates (in inches) of the storm event that generated the sampled runoff;
- (3) The duration between the storm event sampled and the end of the previous measurable (greater than 0.1 inch rainfall) storm event; and,

In addition, the permittee shall maintain a monthly log documenting the amount of rainfall received at this facility on a daily basis. A summarization of this information shall also be submitted with the DMRs.

In the event that sampling of an outfall is required but is not possible due to the absence of effluent flow during a particular testing period, the permittee shall provide written notification to DEQ with the DMRs for the month following the period in which samples were to be collected.

c. Sampling Waivers

When a permittee is unable to collect storm water samples required in Part I.A. or other applicable sections of this permit within a specified sampling period due to adverse climatic conditions, the permittee shall collect a substitute sample from a separate qualifying event in the next period and submit these data along with the data for the routine sample in that period. Adverse weather conditions that may prohibit the collection of samples include weather conditions that create dangerous conditions for personnel (such as local flooding, high winds, hurricanes, tornadoes, electrical storms, etc.) or otherwise make the collection of a sample impracticable (drought, extended frozen conditions, etc.). This sampling waiver for adverse climatic conditions applies to the quarterly visual examinations (2.e. below) as well.

d. Representative Discharges

When a facility has two or more outfalls that, based on a consideration of industrial activities, significant materials and management practices and activities within the area drained by the outfalls, the permittee reasonably believes substantially identical effluents are discharged, the permittee may test the effluent of one of such outfalls and report that the quantitative data also apply to the substantially identical outfall(s) provided that: (1) the representative outfall determination has been approved by DEQ prior to data submittal; and, (2) the permittee includes in the SWPPP a description of the location of the outfalls and explains in detail why the outfalls are expected to discharge substantially identical effluents. This sampling waiver for substantially identical discharges applies to the quarterly visual examinations (2.e. below) as well.

e. Quarterly Visual Examination of Storm Water Quality

The permittee must perform and document a quarterly visual examination of a storm water discharge associated with industrial activity from each outfall, except discharges exempted below. The examination(s) must be made at least once in each of the following three-month periods: January through March, April through June, July through September, and October through December. The visual examination must be made during daylight hours (e.g., normal working hours). If no storm event resulted in runoff from the facility during a monitoring quarter, the permittee is excused from visual examinations for that quarter provided that documentation is included with the monitoring records indicating that no runoff occurred. The documentation must be signed and certified in accordance with Part II.K. of this permit.

- (1) Visual examinations must be made of samples collected within the first 30 minutes (or as soon thereafter as practical, but not to exceed 1 hour) of when the runoff or snowmelt begins discharging from the facility. The examination must document observations of color, odor, clarity, floating solids, settled solids, suspended solids, foam, oil sheen, and other obvious indicators of storm water pollution. The examination must be conducted in a well-lit area. No analytical tests are required to be performed on the samples. All samples (except snow melt samples) must be collected from the discharge resulting from a storm event that is greater than 0.1 inches in magnitude and that occurs at least 72 hours from the previous measurable (greater than 0.1 inch rainfall) storm event. The 72-hour storm interval is waived when the preceding measurable storm did not yield a measurable discharge or if the permittee is able to document that less than a 72-hour interval is representative for local storm events during the sampling period. Where practicable, the same individual should carry out the collection and examination of discharges for the entire permit term. If no qualifying storm event resulted in runoff from the facility during a monitoring quarter, the permittee is excused from visual examinations for that quarter provided that documentation is included with the monitoring records indicating that no qualifying storm event occurred that resulted in storm water runoff during the quarter. The documentation must be signed and certified in accordance with Part II.K.
- (2) The visual examination reports must be maintained onsite with the SWPPP. The report must include the outfall location, the examination date and time, examination personnel, the nature of the discharge (i.e., runoff or snow melt), visual quality of the storm water discharge (including observations of color, odor, clarity, floating solids, settled solids, suspended solids, foam, oil sheen, and other obvious indicators of storm water pollution), and probable sources of any observed storm water contamination.

f. Allowable Non-storm Water Discharges.

- (1) The following non-storm water discharges are authorized by this permit provided the non-storm water component of the discharge is in compliance with paragraph f.(2) below.
 - (a) Discharges from fire fighting activities;
 - (b) Fire hydrant flushings;
 - (c) Potable water, including water line flushings;

- (d) Uncontaminated air conditioning or compressor condensate;
- (e) Irrigation drainage;
- (f) Landscape watering provided all pesticides, herbicides, and fertilizer have been applied in accordance with manufacturer's instructions;
- (g) Pavement wash waters where no detergents are used and no spills or leaks of toxic or hazardous materials have occurred (unless all spilled material has been removed);
- (h) Routine external building wash down which does not use detergents;
- (i) Uncontaminated ground water or spring water;
- (j) Foundation or footing drains where flows are not contaminated with process materials such as solvents;
- (k) Incidental windblown mist from cooling towers that collects on rooftops or adjacent portions of the facility, but not intentional discharges from the cooling tower (e.g., "piped" cooling tower blowdown or drains).

(2) Except for flows from fire fighting activities, the SWPPP must include:

- (a) Identification of each allowable non-storm water source;
- (b) The location where the non-storm water is likely to be discharged; and,
- (c) Descriptions of any best management practices (BMPs) that are being used for each source.

(3) If mist blown from cooling towers is included as one of the allowable non-storm water discharges, the facility must specifically evaluate the potential for the discharges to be contaminated by chemicals used in the cooling tower and must select and implement BMPs to control such discharges so that the levels of cooling tower chemicals in the discharges would not cause or contribute to a violation of an applicable water quality standard.

g. Releases of Hazardous Substances or Oil in Excess of Reportable Quantities

The discharge of hazardous substances or oil in the storm water discharge(s) from the facility shall be prevented or minimized in accordance with the SWPPP for the facility. This permit does not authorize the discharge of hazardous substances or oil resulting from an onsite spill. This permit does not relieve the permittee of the reporting requirements of 40 CFR 110, 40 CFR 117 and 40 CFR 302 or § 62.1-44.34:19 of the Code of Virginia. Where a release containing a hazardous substance or oil in an amount equal to or in excess of a reportable quantity established under either 40 CFR 110, 40 CFR 117 or 40 CFR 302 occurs during a 24-hour period, the permittee is required to notify DEQ in accordance with the requirements of Part II.G. of this permit as soon as he or she has knowledge of the discharge. Where a release enters a municipal separate storm sewer system (MS4), the permittee shall also notify the owner of the MS4. The SWPPP required by this permit must be reviewed to identify measures to prevent the reoccurrence of such releases and to respond to such releases, and the plan must be modified where appropriate.

h. Additional Requirements for Salt Storage

Storage piles of salt used for deicing or other commercial or industrial purposes must be enclosed or covered to prevent exposure to precipitation (except for exposure resulting from adding or removing materials from the pile). Piles do not need to be enclosed or covered where storm water from the pile is not discharged to state waters or the discharges from the piles are authorized under another permit.

2. Storm Water Pollution Prevention Plan (SWPPP)

A SWPPP must be developed for this facility. The plan, and any modifications, shall be prepared in accordance with good engineering practices. The plan shall identify potential sources of pollution that may reasonably be expected to affect the quality of storm water discharges from the facility. In addition,

the plan shall describe and ensure the implementation of practices that are to be used to reduce the pollutants in storm water discharges associated with industrial activity at the facility and assure compliance with the terms and conditions of this permit. The permittee must implement the provisions of the SWPPP as a condition of this permit.

The SWPPP requirements of this permit may be fulfilled by incorporating by reference other plans or documents such as an erosion and sediment control (ESC) plan, a spill prevention control and countermeasure (SPCC) plan developed for the facility under Section 311 of the Clean Water Act or BMP programs otherwise required for the facility provided that the incorporated plan meets or exceeds the plan requirements of section b. below (Contents of the Plan) of this permit. If an ESC plan is being incorporated by reference, it shall have been approved by the locality in which the activity is to occur or by another appropriate plan approving authority authorized under the Virginia Erosion and Sediment Control Regulation 4 VAC 50-30-10 et seq. All plans incorporated by reference into the SWPPP become enforceable under this permit.

a. **Deadlines for Plan Preparation and Compliance**

A SWPPP for the facility was required to be developed and implemented under the previous permit. The existing SWPPP shall be reviewed and modified, as appropriate, to conform to the requirements of this section.

Verify Review of Plan: No later than April 10, 2009

b. **Contents of the Plan**

The contents of the SWPPP shall comply with the requirements listed below and those in section 3. below (Facility-specific Storm Water Conditions) of this permit. These requirements are cumulative. The plan shall include, at a minimum, the following items.

(1) **Pollution Prevention Team**

The SWPPP shall identify the staff individuals by name or title that comprise the facility's SWPPP team. The pollution prevention team is responsible for assisting the facility or plant manager in developing, implementing, maintaining and revising the facility's SWPPP. Responsibilities of each staff individual on the team must be listed.

(2) **Site Description**

The SWPPP shall include the following:

(a) **Activities at the Facility**

A description of the nature of the industrial activities at the facility;

(b) **General Location Map**

A general location map (e.g., USGS quadrangle or other map) with enough detail to identify the location of the facility and the receiving waters within one mile of the facility;

(c) **Site Map**

A site map identifying the following:

- (i) Directions of storm water flow (e.g., use arrows to show which ways storm water will flow);
- (ii) Locations of all existing structural BMPs;
- (iii) Locations of all surface water bodies;

- (iv) Locations of potential pollutant sources identified in paragraph b.(3) below (Summary of Potential Pollutant Sources) and where significant materials are exposed to precipitation;
- (v) Locations where major spills or leaks identified in paragraph b.(4) below (Spills and Leaks) have occurred;
- (vi) Locations of the following activities where such activities are exposed to precipitation: fueling stations; vehicle and equipment maintenance and/or cleaning areas; loading/unloading areas; locations used for the treatment, storage or disposal of wastes and liquid storage tanks;
- (vii) Locations of storm water outfalls and an approximate outline of the area draining to each outfall;
- (viii) Location and description of non-storm water discharges;
- (ix) Locations of the following activities where such activities are exposed to precipitation: processing and storage areas; access roads; rail cars and tracks; the location of transfer of substance in bulk; and machinery; and,
- (x) Location and source of runoff from adjacent property containing significant quantities of pollutants of concern to the facility (the permittee may include an evaluation of how the quality of the storm water running onto the facility impacts the facility's storm water discharges).

(d) Receiving Waters and Wetlands

The name of the nearest receiving water(s), including intermittent streams, dry sloughs, arroyos and the areal extent and description of wetland sites that may receive discharges from the facility.

(3) Summary of Potential Pollutant Sources

The SWPPP shall identify each separate area at the facility where industrial materials or activities are exposed to storm water. Industrial materials or activities include, but are not limited to: material handling equipment or activities, industrial machinery, raw materials, intermediate products, byproducts, final products, or waste products. Material handling activities include the storage, loading and unloading, transportation, or conveyance of any raw material, intermediate product, final product or waste product. For each, separate area identified, the description must include:

- (a) A list of the activities in the area (e.g., material storage, equipment fueling and cleaning, cutting steel beams); and,
- (b) A list of the associated pollutant(s) or pollutant parameter(s) (e.g., crankcase oil, iron, biochemical oxygen demand, pH, etc.) for each activity. The pollutant list must include all significant materials that have been handled, treated, stored or disposed in a manner to allow exposure to storm water between the time of three years before being covered under this permit and the present.

(4) Spills and Leaks

The SWPPP must clearly identify areas where potential spills and leaks that can contribute pollutants to storm water discharges can occur, and their accompanying drainage points. For areas that are exposed to precipitation or that otherwise drain to a storm water conveyance at the facility, the plan must include a list of significant spills and leaks of toxic or hazardous pollutants that occurred during the three-year period prior to being covered under this permit. The list must be updated if significant spills or leaks occur in exposed areas of the facility during the term of this permit. Significant spills and leaks include releases of oil or hazardous substances in excess of reportable quantities, and may also include releases of oil or hazardous substances that are not in excess of reporting requirements.

(5) Sampling Data

The SWPPP must include a summary of existing discharge sampling data taken at the facility, and must also include a summary of sampling data collected during the term of this permit.

(6) Storm Water Controls

The SWPPP shall include a description of storm water management controls appropriate for the facility. The description of controls shall address the following minimum components:

(a) Description of Existing and Planned BMPs

The plan shall describe the type and location of existing nonstructural and structural BMPs selected for each of the areas where industrial materials or activities are exposed to storm water. All the areas identified in paragraph b.(3) above (Summary of Potential Pollutant Sources) should have a BMP(s) identified for the area's discharges. For areas where BMPs are not currently in place, include a description of appropriate BMPs that will be used to control pollutants in storm water discharges. Selection of BMPs should take into consideration:

- (i) The quantity and nature of the pollutants, and their potential to impact the water quality of receiving waters;
- (ii) Opportunities to combine the dual purposes of water quality protection and local flood control benefits, including physical impacts of high flows on streams (e.g., bank erosion, impairment of aquatic habitat, etc.);
- (iii) Opportunities to offset the impact of impervious areas of the facility on ground water recharge and base flows in local streams, taking into account the potential for ground water contamination.

(b) BMP Types to be Considered

The permittee must consider the following types of structural, nonstructural and other BMPs for implementation at the facility. The SWPPP shall describe how each BMP is, or will be, implemented. If this requirement was fulfilled with the area-specific BMPs identified in paragraph b.(6)(a) above (Description of Existing and Planned BMPs), then the previous description is sufficient. However, many of the following BMPs may be more generalized or non-site-specific and therefore not previously considered. If the permittee determines that any of these BMPs are not appropriate for the facility, an explanation of why they are not appropriate shall be included in the plan. The BMP examples listed below are not intended to be an exclusive list of BMPs that may be used. The permittee is encouraged to keep abreast of new BMPs or new applications of existing BMPs to find the most cost effective means of permit compliance for the facility. If BMPs are being used or planned at the facility that are not listed here (e.g., replacing a chemical with a less toxic alternative, adopting a new or innovative BMP, etc.), descriptions of them shall be included in this section of the SWPPP.

(i) Nonstructural BMPs

i.- Good Housekeeping

The permittee must keep all exposed areas of the facility in a clean, orderly manner where such exposed areas could contribute pollutants to storm water discharges. Common problem areas include around trash containers, storage areas and loading docks.

Measures must also include a schedule for regular pickup and disposal of garbage and waste materials; routine inspections for leaks and conditions of drums, tanks and containers.

ii.- Minimizing Exposure

Where practicable, industrial materials and activities should be protected by a storm resistant shelter to prevent exposure to rain, snow, snowmelt, or runoff. Note: Eliminating exposure at all industrial areas may make the facility eligible for the "Conditional Exclusion for No Exposure" provision of 9 VAC 25-31-120 F., thereby eliminating the need for the portion of this permit addressing the storm water associated with industrial activity.

iii.- Preventive Maintenance

The permittee must have a preventive maintenance program that includes timely inspection and maintenance of storm water management devices (e.g., cleaning oil/water separators, catch basins), as well as inspection, testing, maintenance and repairing of facility equipment and systems to avoid breakdowns or failures that could result in discharges of pollutants to surface waters.

iv.- Spill Prevention and Response Procedures

The plan must describe the procedures that will be followed for cleaning up spills or leaks. The procedures and necessary spill response equipment must be made available to those employees who may cause or detect a spill or leak. Where appropriate, the plan must include an explanation of existing or planned material handling procedures, storage requirements, secondary containment, and equipment (e.g., diversion valves), that are intended to minimize spills or leaks at the facility. Measures for cleaning up hazardous material spills or leaks must be consistent with applicable RCRA regulations at 40 CFR Part 264 and 40 CFR Part 265.

v.- Routine Facility Inspections

Facility personnel who are familiar with the industrial activity, the BMPs and the SWPPP shall be identified to inspect all areas of the facility where industrial materials or activities are exposed to storm water. These inspections are in addition to, or as part of, the comprehensive site evaluation required under section e. below (Comprehensive Site Compliance Inspections), and must include an evaluation of the existing storm water BMPs. The inspection frequency shall be specified in the plan based upon a consideration of the level of industrial activity at the facility, but shall be a minimum of quarterly unless more frequent intervals are specified elsewhere in the permit. Any deficiencies in the implementation of the SWPPP that are found must be corrected as soon as practicable, but not later than within 14 days of the inspection, unless permission for a later date is granted in writing by DEQ. The results of the inspections must be documented in the SWPPP, along with any corrective actions that were taken in

response to any deficiencies or opportunities for improvement that were identified.

vi.- Employee Training

The SWPPP must describe the storm water employee training program for the facility. The description should include the topics to be covered, such as spill response, good housekeeping, and material management practices, and must identify periodic dates for such training (e.g., every six months during the months of July and January). Employee training must be provided for all employees that work in areas where industrial materials or activities are exposed to storm water, and for employees that are responsible for implementing activities identified in the SWPPP (e.g., inspectors, maintenance people). The training should inform employees of the components and goals of the SWPPP.

(ii) Structural BMPs

i.- Sediment and Erosion Control

The SWPPP shall identify areas at the facility that, due to topography, land disturbance (e.g., construction), or other factors, have a potential for significant soil erosion. The plan must identify structural, vegetative, and/or stabilization BMPs that will be implemented to limit erosion.

ii.- Management of Runoff

The SWPPP shall describe the traditional storm water management practices [permanent structural BMPs other than those which control the generation or source(s) of pollutants] that currently exist or that are planned for the facility. These types of BMPs are typically used to divert, infiltrate, reuse, or otherwise reduce pollutants in storm water discharges from the site. The plan shall provide that all measures that the permittee determines to be reasonable and appropriate, or are required by a state or local authority shall be implemented and maintained. Factors for the permittee to consider when selecting appropriate BMPs should include: the industrial materials and activities that are exposed to storm water, and the associated pollutant potential of those materials and activities; and, the beneficial and potential detrimental effects on surface water quality, ground water quality, receiving water base flow (dry weather stream flow), and physical integrity of receiving waters.

Structural measures should be placed on upland soils, avoiding wetlands and floodplains, if possible. Structural BMPs may require a separate permit under § 404 of the CWA before installation begins.

iii.- Example BMPs

BMPs that could be used include but are not limited to: storm water detention structures (including wet ponds); storm water retention structures; flow attenuation by use of open vegetated swales and natural depressions; infiltration of runoff on-site; and sequential systems (which combine several practices).

iv.- Other controls

Off-site vehicle tracking of raw, final, or waste materials or sediments, and the generation of dust must be minimized. Tracking or blowing of raw, final, or waste materials from areas of no exposure to exposed areas must be minimized. Velocity dissipation devices (or equivalent measures) must be placed at discharge locations and along the length of any outfall channel if they are necessary to provide a non-erosive flow velocity from the structure to a water course.

c. Maintenance

All BMPs identified in the SWPPP must be maintained in effective operating condition. If site inspections required by paragraph b.(6)(b)(i)v.- above (Routine Facility Inspections) and/or section d. below (Comprehensive Site Compliance Inspections) identify BMPs that are not operating effectively, maintenance must be performed before the next anticipated storm event, or as necessary to maintain the continued effectiveness of storm water controls. If maintenance prior to the next anticipated storm event is impracticable, maintenance must be scheduled and accomplished as soon as practicable. In the case of nonstructural BMPs, the effectiveness of the BMP must be maintained by appropriate means (e.g., spill response supplies available and personnel trained, etc.).

d. Comprehensive Site Compliance Evaluation

The permittee shall conduct facility inspections (site compliance evaluations) at least once a year. The inspections must be done by qualified personnel, and may be either facility employees or outside constituents hired by the facility. The inspectors must be familiar with the industrial activity, the BMPs and the SWPPP and must possess the skills to assess conditions at the facility that could impact storm water quality, and to assess the effectiveness of the BMPs that have been chosen to control the quality of the storm water discharges. If more frequent inspections are conducted, the SWPPP must specify the frequency of inspections.

(1) Scope of the Compliance Evaluation

Inspections must include all areas where industrial materials or activities are exposed to storm water, as identified in paragraph b.(3) above (Summary of Potential Pollutant Sources) and areas where spills and leaks have occurred within the past 3 years. Inspectors should look for:

- (a) Industrial materials, residue or trash on the ground that could contaminate or be washed away in storm water;
- (b) Leaks or spills from industrial equipment, drums, barrels, tanks or similar containers;
- (c) Off-site tracking of industrial materials or sediment where vehicles enter or exit the site;
- (d) Tracking or blowing of raw, final, or waste materials from areas of no exposure to exposed areas; and,
- (e) Evidence of, or the potential for, pollutants entering the drainage system.

Results of both visual and any analytical monitoring done during the year must be taken into consideration during the evaluation. Storm water BMPs identified in the SWPPP must be observed to ensure that they are operating correctly. Where discharge locations or points are accessible, they must be inspected to see whether BMPs are effective in preventing significant impacts to receiving waters. Where discharge locations are inaccessible, nearby downstream locations must be inspected if possible.

- (2) Based on the results of the inspection, the SWPPP shall be modified as necessary [e.g., show additional controls on the map required by item (c) under paragraph b.(2) above (Site Description); revise the description of controls required by paragraph b.(6) above (Storm Water Controls) to include additional or modified BMPs designed to correct problems identified]. Revisions to the SWPPP shall be completed within two weeks following the inspection, unless permission for a later date is granted in writing by DEQ. If existing BMPs need to be modified or if additional BMPs are necessary, implementation must be completed before the next anticipated storm event, if practicable, but not more than 12 weeks after completion of the comprehensive site evaluation, unless permission for a later date is granted in writing by DEQ.
- (3) Compliance Evaluation Report

A report summarizing the scope of the inspection, name(s) of personnel making the inspection, the date(s) of the inspection, and major observations relating to the implementation of the SWPPP, and actions taken in accordance with paragraph e.(2) above shall be made and retained as part of the SWPPP for at least three years from the date of the inspection. Major observations should include: the location(s) of discharges of pollutants from the site; location(s) of BMPs that need to be maintained; location(s) of BMPs that failed to operate as designed or proved inadequate for a particular location; and location(s) where additional BMPs are needed that did not exist at the time of inspection. The report shall identify any incidents of noncompliance. Where a report does not identify any incidents of noncompliance, the report shall contain a certification that the facility is in compliance with the SWPPP and this permit. The report shall be signed in accordance with Part II K.

- (4) Where compliance evaluation schedules overlap with routine inspections required under paragraph b.(6)(b)(i)v.- above (Routine Facility Inspections), the annual compliance evaluation may be used as one of the routine inspections.

e. Signature and Plan Review

- (1) Signature/Location

The plan shall be signed in accordance with Part II K, and retained on-site at the facility in accordance with Part II B 2.

- (2) Availability

The permittee shall make the SWPPP, annual site compliance inspection report, and other information available to DEQ upon request.

- (3) Required modifications

DEQ may notify the permittee at any time that the plan does not meet one or more of the minimum requirements of this permit. The notification shall identify those provisions of the permit that are not being met, as well as the required modifications. The permittee shall make the required changes to the SWPPP within 60 days of receipt of such notification, unless permission for a later date is granted in writing by DEQ and shall submit a written certification to DEQ that the requested changes have been made.

f. Maintaining an Updated SWPPP

The permittee shall amend the SWPPP whenever:

- (1) There is a change in design, construction, operation, or maintenance at the facility that has a significant effect on the discharge, or the potential for the discharge, of pollutants from the facility;

- (2) During inspections, monitoring, or investigations by facility personnel or by local, state, or federal officials, it is determined that the SWPPP is ineffective in eliminating or significantly minimizing pollutants from sources identified under paragraph b.(3) above (Summary of Potential Pollutant Sources), or is otherwise not achieving the general objectives of controlling pollutants in discharges from the facility.

g. Special Pollution Prevention Plan Requirements

- (1) Additional Requirements for Storm Water Discharges Associated With Industrial Activity That Discharge Into or Through Municipal Separate Storm Sewer Systems.
 - (a) In addition to the applicable requirements of this permit, facilities covered by this permit must comply with applicable requirements in municipal storm water management programs developed under VPDES permits issued for the discharge of the municipal separate storm sewer system that receives the facility's discharge, provided the permittee has been notified of such conditions.
 - (b) Permittees that discharge storm water associated with industrial activity through a municipal separate storm sewer system shall make plans available to the municipal operator of the system upon request.
- (2) Additional Requirements for Storm Water Discharges Associated with Industrial Activity from Facilities Subject to EPCRA § 313 Reporting Requirements

Any potential pollutant sources for which the facility has reporting requirements under EPCRA 313 must be identified in the SWPPP in paragraph b.(3) above (Summary of Potential Pollutant Sources). Note: this additional requirement is only applicable if the facility is subject to reporting requirements under EPCRA 313.

"Section 313 water priority chemicals" means a chemical or chemical categories which: (i) are listed at 40 CFR 372.65 (2002) pursuant to § 313 of the Emergency Planning and Community Right-to-Know Act (EPCRA) (also known as Title III of the Superfund Amendments and Reauthorization Act (SARA) of 1986) (42 USC § 11001 et seq.); (ii) are present at or above threshold levels at a facility subject to EPCRA § 313 reporting requirements; and (iii) that meet at least one of the following criteria: (a) are listed in Appendix D of 40 CFR Part 122 (2002) on either Table II (Organic priority pollutants), Table III (Certain metals, cyanides and phenols) or Table V (Certain toxic pollutants and hazardous substances); (b) are listed as a hazardous substance pursuant to § 311(b)(2)(A) of the Clean Water Act at 40 CFR 116.4 (2002); or (c) are pollutants for which EPA has published acute or chronic water quality criteria.

3. Facility-specific Storm Water Conditions

Glass, Clay, Cement, Concrete, and Gypsum Products

The requirements listed under this section apply to storm water discharges associated with industrial activity from facilities generally classified under Standard Industrial Classification (SIC) Major Group 32 that are engaged in either manufacturing the following products or performing the following activities: flat, pressed, or blown glass or glass containers; hydraulic cement; clay products, including tile and brick; pottery and porcelain electrical supplies; concrete products; gypsum products; nonclay refractories; minerals and earths, ground or otherwise treated; lime manufacturing; cut stone and stone products; asbestos products; and, mineral wool and mineral wool insulation products.

In addition to the requirements of Part I.2.b., the SWPPP shall include, at a minimum, the following items.

a. Site Description and Site Map

The site map shall identify the locations of the following, if applicable: bag house or other dust control device; recycle/sedimentation pond, clarifier or other device used for the treatment of process wastewater and the areas that drain to the treatment device.

b. Storm Water Controls

(1) Good Housekeeping

- (a) Facilities shall prevent or minimize the discharge of: spilled cement; aggregate (including sand or gravel); kiln dust; fly ash; settled dust; and, other significant materials in storm water from paved portions of the site that are exposed to storm water. Measures used to minimize the presence of these materials may include regular sweeping, or other equivalent measures. The plan shall indicate the frequency of sweeping or equivalent measures. The frequency shall be determined based upon consideration of the amount of industrial activity occurring in the area and frequency of precipitation, but shall not be less than once per week, if cement, aggregate, kiln dust, fly ash, or settled dust are being handled or processed.
- (b) Facilities shall prevent the exposure of fine granular solids (such as cement, kiln dust, etc.) to storm water. Where practicable, these materials shall be stored in enclosed silos or hoppers, buildings, or under other covering.

(2) Routine Facility Inspections

The inspection shall take place while the facility is in operation and shall include all of the following areas that are exposed to storm water: material handling areas, above ground storage tanks, hoppers or silos, dust collection/containment systems, truck wash down/equipment cleaning areas.

ATTACHMENT 7

EFFLUENT/SLUDGE/GROUND WATER
LIMITATIONS/MONITORING
RATIONALE/SUITABLE DATA/STREAM MODELING/
ANTIDEGRADATION/ANTIBACKSLIDING

THE EFFLUENT LIMITATIONS AND MONITORING RATIONALE ARE BASED ON THE FOLLOWING:

Historical Background

Over the last two 5-year permit terms, the subject facility has implemented measures that have resulted in improvements in both Whole Effluent Toxicity and effluent chemical concentrations. As a result, the permit, as currently drafted, contains reduced monitoring where appropriate. While good performance is anticipated to continue, the permit does contain provisions to revert to an unreduced monitoring frequency should it become necessary.

Federal Effluent Guidelines (FEG), Title 40 CFR Part 426 - Glass Manufacturing Point Source Category, contains Subpart I-Machine Pressed and Blown Glass manufacturing Subcategory [Reserved]. However, since this subpart remains "reserved" no FEG limitations are currently applicable to this facility.

Please refer to tabulated outfall 001 and outfall 901 effluent chemistry and toxicity data contained in the Attachment. Additionally, please find the MIX.exe, MSTRANTI.xls, and STATS.exe spreadsheets in this attachment.

Outfall 001

- FLOW –** There is no limit on flow based on design. The flow is measured in MGD. The monitoring frequency is once per week. This monitoring frequency and sample type should be appropriate for assessment of potential discharge impacts.
- pH –** The limits of 6.0 to 9.0 standard units are water quality-based limits. This is a continuous discharge to a Rutledge Creek, a tributary of the Dan River. The discharge comprises a large portion of the receiving stream; therefore, these limits will ensure compliance with water quality standards. The monitoring frequency is set 2 times per month. The sample type is grab (required for pH). This monitoring frequency and sample type should provide enough data for proper assessment of compliance with the effluent limit.
- TSS -** The limits of 55.1 lbs/day, monthly average, and 110.2 lbs/day, daily max, converted from previous permit limits of 25 kg/d, monthly average, and 50 kg/d, daily max during the last reissuance, are continued with this reissuance. These limits were developed based on best professional judgment (BPJ). Based on the contributing sources to this outfall, TSS is an appropriate parameter and is a good basic indicator of effluent quality and its reduction eliminates the potential for deposition in the receiving stream. The reduced monitoring frequency of 1/3 months is based on a reduction due to the prior (and current) history of facility compliance. The sample type is 24-hour composite. This monitoring frequency and sample type should be appropriate for assessment of potential discharge impacts and should provide enough data for proper assessment of compliance with the effluent limits.
- TPH -** The limits of 10 mg/l (monthly avg.) and 15 mg/l (daily max) are new with this reissuance. Formerly the permit contained the same limits, measured as oil & grease. Since the plant utilizes petroleum based lubricants, TPH is a more appropriate indicator parameter. This limit is based on BPJ. Oil is a common contaminant from industrial operations and is often associated with stormwater runoff. Based on the contributing sources, TPH is an appropriate parameter and a good basic indicator of effluent quality. Its reduction eliminates potential stream impacts (sheens, toxic effects). The reduced monitoring frequency of 1/3 months is based on a reduction due to prior facility compliance with the Oil & Grease limits. Monitoring for TPH, at the reduced frequency, is considered appropriate. The sample type is grab (required for TPH). This monitoring frequency and sample type should be appropriate for assessment of potential discharge impacts and provide enough data for proper assessment of compliance with the effluent limits (assuming continued compliance).
- Temp –** The discharge, which contains a cooling water component, makes up a large portion of the receiving stream; therefore, the limit of 32°C will ensure compliance with water quality standards (Class III receiving waters). The monitoring frequency is 1/week and the sample type is immersion stabilization. This monitoring frequency and sample type should provide enough data for proper assessment of compliance with the effluent limit.

- T. Iron -** The limits of 3 lbs/day (monthly avg.) and 5.9 lbs/day (daily max), converted from the previous permit limits of 1.4 kg/day (monthly avg.) and 2.7 kg/day (daily max), during the last reissuance, are continued with this reissuance. These limits were initially developed by EPA's consultant based on best professional judgment. Based on the manufacturing process and data, this parameter was limited in order to prevent potential impacts to the receiving stream (toxic effects). The reduced monitoring frequency of 1/3 months is based on a prior history of facility compliance. The sample type is 24-hour composite. This monitoring frequency and sample type should be appropriate for assessment of potential discharge impacts and provide enough data for proper assessment of compliance with the effluent limits.
- T. Lead -** The limits of 0.19 lbs/day (monthly avg.) and 0.39 lbs/day (daily max), converted from the previous permit limits of 0.09 kg/day (monthly avg.) and 0.18 kg/day (daily max), during the last permit reissuance, are continued with this reissuance. These limits were initially developed by EPA's consultant based on best professional judgment. Based on the manufacturing process and data, this parameter was limited in order to prevent potential impacts to the receiving stream (toxic effects). The reduced monitoring frequency of 1/3 months is based on a prior history of facility compliance. The sample type is 24-hour composite. This monitoring frequency and sample type should be appropriate for assessment of potential discharge impacts and provide enough data for proper assessment of compliance with the effluent limits (assuming continued compliance).
- TRC -** The total residual chlorine limits of 0.011 mg/l (monthly average) and 0.016 mg/l (daily max) are based on the chronic water quality criterion and will ensure compliance with water quality standards. The effluent monitoring frequency is once per week and the sample type is grab (required for chlorine). This monitoring frequency should provide enough data for proper assessment of compliance with the effluent limits.

Dissolved Lead

The permit currently has a mass limit for lead (noted above). As part of the last reissuance, lead data was evaluated and the data indicated the potential need for a limit when evaluated using STATS.EXE. However, the data were in Total form. Then as now, it is not appropriate to base a limit on total (lead) data. Since the facility uses lead in the production process for certain products, dissolved lead analyses were required during the 2003-2008 permit term, in order to provide data for a proper assessment of the need for effluent limitations. The dissolved lead data, generated during this permit term, was evaluated during this reissuance. Based on the data generated, no limitation is needed at this time. Furthermore, data generated resulted in less than 1 ug/l for all analyses with one exception of a value at 2 ug/l. While monitoring is retained based on the use of lead in the process, the monitoring frequency has been reduced to 1/year with this reissuance. The sample type is grab. This monitoring frequency and sample type should provide enough data for proper assessment.

Total Recoverable Zinc

The limits of 51 ug/l (monthly average and maximum) are new with this reissuance. During the last permit reissuance, a sufficient dataset was not available for assessment of effluent zinc concentrations. Since the facility does use zinc in the production process, dissolved zinc analyses were required during the 2003-2008 permit term in order to provide data for a proper assessment of the need for effluent limitations. The dissolved lead data, generated during this permit term, were evaluated during this reissuance. Based on the data generated, the above limitations were determined to be needed at this time (see STATS.exe printout).

Permit development procedures allow for the inclusion of a schedule of compliance for cases where a new limitation is included in a VPDES permit. In this case, the facility requested the inclusion of a schedule of compliance upon owner review of the proposed draft permit.

The monitoring frequency is 1/month and the sample type is grab. This monitoring frequency and sample type should provide enough data for proper assessment.

The data generated during the upcoming permit term, will be analyzed for potential monitoring frequency reduction upon permit reissuance (or modification).

Whole Effluent Toxicity (WET) Limitation

The WET limit of 100% = NOAEC is based on acute toxicity and is continued with this reissuance. Quarterly WET limitation results submitted during the current permit term have all resulted in endpoints of 100%, indicating no effluent toxicity to the indicator organism. As a result, the WET limitation monitoring frequency has been reduced to 1/6 months with this reissuance. The sample type is 24-hour flow-proportioned composite samples collected during dry weather flow. This monitoring frequency and sample type should provide enough data for proper assessment of compliance with the WET limitation.

TMP Toxicity Testing

In addition to the above WET limitation, the subject permit requires chronic toxicity testing on the continuous outfall 001 discharge. This requirement is continued with this reissuance. Chronic toxicity testing has been reduced to 1/year. This reduced monitoring frequency is continued with this reissuance. The sample type is 24-hour flow-proportioned composite samples. This monitoring frequency and sample type should provide enough data for proper assessment.

Total Boron

This monitoring requirement is new with this reissuance. The facility is currently working on resolution of potential groundwater impacts associated with historical incidents. Boron is a material used in this facility's industrial process. It is also a constituent of interest in the groundwater. DEQ monitoring staff requested annual monitoring for boron to determine potential transport of groundwater via the outfall 001 treatment and/or conveyance system. The sample type is 24-hour flow-proportioned composite samples. This monitoring frequency and sample type should provide enough data for proper assessment.

Total Nitrogen, Total Nitrate, Total Nitrite

Monitoring for these parameters is new with this reissuance. The facility is currently working on resolution of potential groundwater impacts associated with historical incidents. In this regard, DEQ monitoring staff requested annual monitoring for the Total Nitrogen series to determine potential transport of groundwater via the outfall 001 treatment and/or conveyance system. The sample type is 24-hour flow-proportioned composite samples. This monitoring frequency and sample type should provide enough data for proper assessment.

Outfall 901 (commingled industrial stormwater and outfall 001 process wastewater)

FLOW – There is no limit on flow based on design. The flow is measured in MGD. Since this stormwater commingles with the process water prior to the parshall flume, flow can be measured. In addition, this makes traditional monitoring of flow in MG inappropriate. The frequency of Part I.A. measurement is 1/year. This sample type and monitoring frequency should be adequate for assessment of potential stormwater impacts.

pH – The limits of 6.0 to 9.0 standard units are water quality-based limits. The discharge comprises a large portion of the receiving stream; therefore, these limits will ensure compliance with water quality standards. The monitoring frequency is set 1/year and the sample type is grab (required for pH). This sample type and monitoring frequency should be adequate for assessment of potential stormwater impacts.

TSS,TPH

Based on facility operations and monitoring data, these parameters are being monitored. The frequency of measurement is 1/year and the sample type is grab. This sample type and monitoring frequency should be adequate for assessment of potential stormwater impacts and potential assessment as to the effectiveness of the facility's SWPPP.

Dissolved Lead

Based on facility operations and monitoring data, this parameter is being monitored. Based on data submitted during the current permit term, the frequency of measurement has been reduced to 1/Year with this reissuance. The sample type is grab. This sample type and monitoring frequency should be adequate for assessment of potential stormwater impacts and potential assessment as to the effectiveness of the facility's SWPPP.

Dissolved Zinc

Based on facility operations and monitoring data, this parameter is being monitored. Data generated during the current permit term indicated a net addition of zinc in outfall 901. This indicates contributions of dissolved zinc from stormwater runoff from this industrial facility. The frequency of measurement is 1/3 months and the sample type is grab. This sample type and monitoring frequency should be adequate for assessment of potential stormwater impacts and potential assessment as to the effectiveness of the facility's SWPPP.

Memorandum

To: Amanda Gray
CC: File, Kirk Batsel
From: Mike Shaver, SCRO Regional Biologist *MS*
Date: 1/24/2008
Re: Corning Industries (VA-0001627) Recommended Monitoring for Outfall 001

Following discussions with David Miles and Kirk Batsel, I recommend DEQ include monitoring requirements for the re-issuance of Corning Industries VPDES industrial stormwater permit (VA0001627). Corning Danville had serious sewage transport difficulties in the late 1990's which resulted in releases of nitrates and boron into the groundwater (IR 2000-W-185). Corning addressed these issues in 2000-2001 with updated, lined sewer lines and acid neutralization basins. Corning has voluntarily installed several groundwater monitoring wells on-site and has conducted a groundwater characterization study which will continue, quarterly, for at least one more year.

DEQ is concerned about the transport of the groundwater affected by the release and would like Corning to further characterize the waters associated with the stormwater/non-contact cooling water lagoon associated with permit #VA0001627. The permittee is currently required to characterize the discharge (metals, nutrients, and toxicity) once every five years during the permit application process. DEQ suggests a portion of this monitoring be increased to a yearly basis. The parameters of interest are total boron ($\mu\text{g/L}$), total nitrogen, total nitrate, and total nitrite (all nitrogen species reported in mg/L). These parameters should be sampled yearly at Outfall 001. The purpose of the increased monitoring is to determine whether the affected groundwater infiltrates the stormwater collection system during transport or directly into the lagoon via groundwater springs.

Corning Mix.exe results.txt

Mixing Zone Predictions for

Corning Danville 001

Effluent Flow = 0.272 MGD
Stream 7Q10 = 0.006 MGD
Stream 30Q10 = 0.009 MGD
Stream 1Q10 = 0.005 MGD
Stream slope = 0.013 ft/ft
Stream width = 5 ft
Bottom scale = 5
Channel scale = 1

Mixing Zone Predictions @ 7Q10

Depth = .2379 ft
Length = 48.14 ft
Velocity = .3614 ft/sec
Residence Time = .0015 days

Recommendation:

A complete mix assumption is appropriate for this situation and the entire 7Q10 may be used.

Mixing Zone Predictions @ 30Q10

Depth = .2398 ft
Length = 47.77 ft
Velocity = .3628 ft/sec
Residence Time = .0015 days

Recommendation:

A complete mix assumption is appropriate for this situation and the entire 30Q10 may be used.

Mixing Zone Predictions @ 1Q10

Depth = .2376 ft
Length = 48.17 ft
Velocity = .3609 ft/sec
Residence Time = .0371 hours

Recommendation:

A complete mix assumption is appropriate for this situation and the entire 1Q10 may be used.

Virginia DEQ Mixing Zone Analysis Version 2.1

FRESHWATER WATER QUALITY CRITERIA / WASTELOAD ALLOCATION ANALYSIS

Facility Name: Coming - Danville 001

Permit No.: VA0001627

Receiving Stream: Rutledge Creek

Version: OWP Guidance Memo 00-2011 (8/24/00)

Stream Information

Mean Hardness (as CaCO₃) = 25 mg/L
 90% Temperature (Annual) = 24.6 deg C
 90% Temperature (Wet season) = 12 deg C
 90% Maximum pH = 8.15 SU
 10% Maximum pH = 7.12 SU
 Tier Designation (1 or 2) = 1
 Public Water Supply (PWS) Y/N? = n
 Trout Present Y/N? = n
 Early Life Stages Present Y/N? = y

Stream Flows

1Q10 (Annual) = 0.005 MGD
 7Q10 (Annual) = 0.006 MGD
 30Q10 (Annual) = 0.009 MGD
 1Q10 (Wet season) = 0.026 MGD
 30Q10 (Wet season) = 0.041 MGD
 30Q5 = 0.021 MGD
 Harmonic Mean = 0.071 MGD
 Annual Average = NA MGD

Mixing Information

Annual - 1Q10 Mix = 100 %
 - 7Q10 Mix = 100 %
 - 30Q10 Mix = 100 %
 Wet Season - 1Q10 Mix = 100 %
 - 30Q10 Mix = 100 %

Effluent Information

Mean Hardness (as CaCO₃) = 36.92 mg/L
 90% Temp (Annual) = 30.6 deg C
 90% Temp (Wet season) = 19 deg C
 90% Maximum pH = 7.327 SU
 10% Maximum pH = 7.16 SU
 Discharge Flow = 0.272 MGD

Parameter (ug/l unless noted)	Background Conc.	Water Quality Criteria			Wasteload Allocations			Antidegradation Baseline			Antidegradation Allocations			Most Limiting Allocations		
		Acute	Chronic	HH (PWS)	HH	Acute	Chronic	HH (PWS)	HH	Acute	Chronic	HH (PWS)	HH	Acute	Chronic	HH (PWS)
Acenaphthene	0	-	-	na	2.7E+03	-	-	na	2.9E+03	-	-	-	-	-	-	na
Acrolein	0	-	-	na	7.8E+02	-	-	na	8.4E+02	-	-	-	-	-	-	na
Acrylonitrile ^c	0	-	-	na	6.6E+00	-	-	na	8.3E+00	-	-	-	-	-	-	na
Aldrin ^c	0	3.0E+00	-	na	1.4E+03	3.1E+00	-	na	1.8E+03	-	-	-	-	3.1E+00	-	na
Ammonia-N (mg/l) (Yearly)	0	2.51E+01	1.78E+00	na	-	2.6E+01	1.8E+00	na	-	-	-	-	-	2.6E+01	1.8E+00	na
Ammonia-N (mg/l) (High Flow)	0	2.42E+01	3.82E+00	na	-	2.7E+01	4.4E+00	na	-	-	-	-	-	2.7E+01	4.4E+00	na
Anthracene	0	-	-	na	1.1E+05	-	-	na	1.2E+05	-	-	-	-	-	-	na
Antimony	0	-	-	na	4.3E+03	-	-	na	4.6E+03	-	-	-	-	-	-	na
Arsenic	0	3.4E+02	1.5E+02	na	-	3.5E+02	1.5E+02	na	-	-	-	-	-	3.5E+02	1.5E+02	na
Barium	0	-	-	na	-	-	-	na	-	-	-	-	-	-	-	na
Benzene ^c	0	-	-	na	7.1E+02	-	-	na	9.0E+02	-	-	-	-	-	-	na
Benzidine ^c	0	-	-	na	5.4E+03	-	-	na	6.8E+03	-	-	-	-	-	-	na
Benzo (a) anthracene ^c	0	-	-	na	4.8E+01	-	-	na	6.2E+01	-	-	-	-	-	-	na
Benzo (b) fluoranthene ^c	0	-	-	na	4.8E+01	-	-	na	6.2E+01	-	-	-	-	-	-	na
Benzo (k) fluoranthene ^c	0	-	-	na	4.9E+01	-	-	na	6.2E+01	-	-	-	-	-	-	na
Benzo (a) pyrene ^c	0	-	-	na	4.9E+01	-	-	na	6.2E+01	-	-	-	-	-	-	na
Bis(2-Chloroethyl) Ether	0	-	-	na	1.4E+01	-	-	na	1.5E+01	-	-	-	-	-	-	na
Bis(2-Chloroisopropyl) Ether	0	-	-	na	1.7E+05	-	-	na	1.8E+05	-	-	-	-	-	-	na
Bromofom ^c	0	-	-	na	3.6E+03	-	-	na	4.5E+03	-	-	-	-	-	-	na
Butylbenzylphthalate	0	-	-	na	5.2E+03	-	-	na	5.6E+03	-	-	-	-	-	-	na
Cadmium	0	1.3E+00	5.2E-01	na	-	1.3E+00	5.3E-01	na	-	-	-	-	-	1.3E+00	5.3E-01	na
Carbon Tetrachloride ^c	0	-	-	na	4.4E+01	-	-	na	5.5E+01	-	-	-	-	-	-	na
Chlordane ^c	0	2.4E+00	4.3E-03	na	2.2E-02	2.4E+00	4.4E-03	na	2.8E-02	-	-	-	-	2.4E+00	4.4E-03	na
Chloride	0	8.6E+05	2.3E+05	na	-	8.9E+05	2.4E+05	na	-	-	-	-	-	8.9E+05	2.4E+05	na
TRC	0	1.9E+01	1.1E+01	na	-	1.9E+01	1.1E+01	na	-	-	-	-	-	1.9E+01	1.1E+01	na
Chlorobenzene	0	-	-	na	2.1E+04	-	-	na	2.3E+04	-	-	-	-	-	-	na

Parameter (ug/l unless noted)	Background Conc.	Water Quality Criteria				Wasteload Allocations				Antidegradation Baseline				Antidegradation Allocations				Most Limiting Allocations			
		Acute	Chronic	HH (PWS)	HH	Acute	Chronic	HH (PWS)	HH	Acute	Chronic	HH (PWS)	HH	Acute	Chronic	HH (PWS)	HH	Acute	Chronic	HH (PWS)	HH
Chlorodibromomethane ^c	0	-	-	na	3.4E+02	-	-	na	4.3E+02	-	-	-	-	-	-	-	-	-	-	na	4.3E+02
Chloroform ^c	0	-	-	na	2.9E+04	-	-	na	3.7E+04	-	-	-	-	-	-	-	-	-	-	na	3.7E+04
2-Chloronaphthalene	0	-	-	na	4.3E+03	-	-	na	4.6E+03	-	-	-	-	-	-	-	-	-	-	na	4.6E+03
2-Chlorophenol	0	-	-	na	4.0E+02	-	-	na	4.3E+02	-	-	-	-	-	-	-	-	-	-	na	4.3E+02
Chlorpyrifos	0	8.3E-02	4.1E-02	na	-	-	-	8.5E-02	4.2E-02	-	-	-	-	-	-	-	-	8.5E-02	4.2E-02	na	-
Chromium III	0	2.5E+02	3.3E+01	na	-	-	-	2.6E+02	3.3E+01	-	-	-	-	-	-	-	-	2.6E+02	3.3E+01	na	-
Chromium VI	0	1.6E+01	1.1E+01	na	-	-	-	1.6E+01	1.1E+01	-	-	-	-	-	-	-	-	1.6E+01	1.1E+01	na	-
Chromium, Total	0	-	-	na	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	na	-
Chrysene ^c	0	-	-	na	4.9E-01	-	-	-	6.2E-01	-	-	-	-	-	-	-	-	-	-	na	6.2E-01
Copper	0	5.2E+00	3.8E+00	na	-	-	-	5.3E+00	3.9E+00	-	-	-	-	-	-	-	-	5.3E+00	3.9E+00	na	-
Cyanide	0	2.2E+01	5.2E+00	na	2.2E+05	-	-	2.2E+01	5.3E+00	-	-	-	-	-	-	-	-	2.2E+01	5.3E+00	na	2.3E+05
DDD ^c	0	-	-	na	8.4E-03	-	-	-	1.1E-02	-	-	-	-	-	-	-	-	-	-	na	1.1E-02
DDE ^c	0	-	-	na	5.9E-03	-	-	-	7.4E-03	-	-	-	-	-	-	-	-	-	-	na	7.4E-03
DDT ^c	0	1.1E+00	1.0E-03	na	5.9E-03	-	-	1.1E+00	1.0E-03	-	-	-	-	-	-	-	-	1.1E+00	1.0E-03	na	7.4E-03
Demeton	0	-	1.0E-01	na	-	-	-	-	1.0E-01	-	-	-	-	-	-	-	-	-	1.0E-01	na	-
Dibenz(a,h)anthracene ^c	0	-	-	na	4.9E-01	-	-	-	6.2E-01	-	-	-	-	-	-	-	-	-	-	na	6.2E-01
Diethyl phthalate	0	-	-	na	1.2E+04	-	-	-	1.3E+04	-	-	-	-	-	-	-	-	-	-	na	1.3E+04
Dichloromethane	0	-	-	na	1.6E+04	-	-	-	2.0E+04	-	-	-	-	-	-	-	-	-	-	na	2.0E+04
(Methylene Chloride) ^c	0	-	-	na	1.7E+04	-	-	-	1.8E+04	-	-	-	-	-	-	-	-	-	-	na	1.8E+04
1,2-Dichlorobenzene	0	-	-	na	2.8E+03	-	-	-	2.8E+03	-	-	-	-	-	-	-	-	-	-	na	2.8E+03
1,3-Dichlorobenzene	0	-	-	na	2.8E+03	-	-	-	2.8E+03	-	-	-	-	-	-	-	-	-	-	na	2.8E+03
1,4-Dichlorobenzene	0	-	-	na	7.7E-01	-	-	-	9.7E-01	-	-	-	-	-	-	-	-	-	-	na	9.7E-01
3,3-Dichlorobenzidine ^c	0	-	-	na	4.6E+02	-	-	-	5.8E+02	-	-	-	-	-	-	-	-	-	-	na	5.8E+02
Dichlorobromomethane ^c	0	-	-	na	9.8E+02	-	-	-	1.2E+03	-	-	-	-	-	-	-	-	-	-	na	1.2E+03
1,2-Dichloroethane ^c	0	-	-	na	1.7E+04	-	-	-	1.8E+04	-	-	-	-	-	-	-	-	-	-	na	1.8E+04
1,1-Dichloroethylene	0	-	-	na	1.4E+05	-	-	-	1.5E+05	-	-	-	-	-	-	-	-	-	-	na	1.5E+05
1,2-trans-dichloroethylene	0	-	-	na	7.9E+02	-	-	-	8.5E+02	-	-	-	-	-	-	-	-	-	-	na	8.5E+02
2,4-Dichlorophenol	0	-	-	na	3.9E+02	-	-	-	4.9E+02	-	-	-	-	-	-	-	-	-	-	na	4.9E+02
2,4-Dichlorophenoxy acetic acid (2,4-D)	0	-	-	na	1.7E+03	-	-	-	1.8E+03	-	-	-	-	-	-	-	-	-	-	na	1.8E+03
1,2-Dichloropropane ^c	0	2.4E-01	5.9E-02	na	1.4E-03	-	-	2.4E-01	5.7E-02	-	-	-	-	-	-	-	-	2.4E-01	5.7E-02	na	1.8E-03
1,3-Dichloropropene	0	-	-	na	1.2E+05	-	-	-	1.3E+05	-	-	-	-	-	-	-	-	-	-	na	1.3E+05
Dieldrin ^c	0	-	-	na	5.0E+01	-	-	-	7.4E+01	-	-	-	-	-	-	-	-	-	-	na	7.4E+01
Diethyl Phthalate	0	-	-	na	2.3E+03	-	-	-	2.5E+03	-	-	-	-	-	-	-	-	-	-	na	2.5E+03
Di-2-Ethylhexyl Phthalate ^c	0	-	-	na	2.9E+06	-	-	-	3.1E+06	-	-	-	-	-	-	-	-	-	-	na	3.1E+06
2,4-Dimethylphenol	0	-	-	na	1.2E+04	-	-	-	1.3E+04	-	-	-	-	-	-	-	-	-	-	na	1.3E+04
Dimethyl Phthalate	0	-	-	na	1.4E+04	-	-	-	1.5E+04	-	-	-	-	-	-	-	-	-	-	na	1.5E+04
Di-n-Butyl Phthalate	0	-	-	na	7.6E+02	-	-	-	8.2E+02	-	-	-	-	-	-	-	-	-	-	na	8.2E+02
2,4-Dinitrophenol	0	-	-	na	8.1E+01	-	-	-	1.1E+02	-	-	-	-	-	-	-	-	-	-	na	1.1E+02
2-Methyl-4,6-Dinitrophenol	0	-	-	na	1.2E+06	-	-	-	na	-	-	-	-	-	-	-	-	-	-	na	na
2,4-Dinitrotoluene ^c	0	-	-	na	5.4E+00	-	-	-	6.8E+00	-	-	-	-	-	-	-	-	-	-	na	6.8E+00
Dioxin (2,3,7,8- tetrachlorodibenzo-p-dioxin) (ppq)	0	-	-	na	2.2E-01	-	-	-	5.7E-02	-	-	-	-	-	-	-	-	2.2E-01	5.7E-02	na	2.6E+02
1,2-Diphenylhydrazine ^c	0	-	-	na	2.4E+02	-	-	-	2.6E+02	-	-	-	-	-	-	-	-	-	-	na	2.6E+02
Alpha-Endosulfan	0	2.2E-01	5.9E-02	na	2.4E+02	-	-	2.2E-01	5.7E-02	-	-	-	-	-	-	-	-	2.2E-01	5.7E-02	na	2.6E+02
Beta-Endosulfan	0	2.2E-01	5.9E-02	na	2.4E+02	-	-	-	2.6E+02	-	-	-	-	-	-	-	-	-	-	na	2.6E+02
Endosulfan Sulfate	0	8.6E-02	3.6E-02	na	8.1E-01	-	-	8.8E-02	3.7E-02	-	-	-	-	-	-	-	-	8.8E-02	3.7E-02	na	8.7E-01
Endrin	0	-	-	na	8.1E-01	-	-	-	8.7E-01	-	-	-	-	-	-	-	-	-	-	na	8.7E-01
Endrin Aldehyde	0	-	-	na	8.1E-01	-	-	-	8.7E-01	-	-	-	-	-	-	-	-	-	-	na	8.7E-01

Parameter (ug/l unless noted)	Background Conc.	Water Quality Criteria			Wasteload Allocations			Antidegradation Baseline			Antidegradation Allocations			Most Limiting Allocations		
		Acute	Chronic	HH (PWS)	HH	Acute	Chronic	HH (PWS)	HH	Acute	Chronic	HH (PWS)	HH	Acute	Chronic	HH (PWS)
Ethylbenzene	0	-	-	na	2.9E+04	-	-	na	3.1E+04	-	-	-	-	-	-	na
Fluoranthene	0	-	-	na	3.7E+02	-	-	na	4.0E+02	-	-	-	-	-	-	na
Fluorene	0	-	-	na	1.4E+04	-	-	na	1.5E+04	-	-	-	-	-	-	na
Foaming Agents	0	-	-	na	-	-	-	na	-	-	-	-	-	-	-	na
Guthion	0	-	1.0E-02	na	-	-	1.0E-02	na	-	-	-	-	-	-	1.0E-02	na
Heptachlor ^c	0	5.2E-01	3.8E-03	na	2.1E-03	5.3E-01	3.9E-03	na	2.6E-03	-	-	-	-	5.3E-01	3.9E-03	na
Heptachlor Epoxide ^c	0	5.2E-01	3.8E-03	na	1.1E-03	5.3E-01	3.9E-03	na	1.4E-03	-	-	-	-	5.3E-01	3.9E-03	na
Hexachlorobenzene ^c	0	-	-	na	7.7E-03	-	-	na	9.7E-03	-	-	-	-	-	-	na
Hexachlorobutadiene ^c	0	-	-	na	5.0E+02	-	-	na	6.3E+02	-	-	-	-	-	-	na
Hexachlorocyclohexane	0	-	-	na	1.3E-01	-	-	na	1.6E-01	-	-	-	-	-	-	na
Alpha-BHC ^c	0	-	-	na	4.6E-01	-	-	na	5.8E-01	-	-	-	-	-	-	na
Beta-BHC ^c	0	-	-	na	6.3E-01	-	-	na	7.9E-01	-	-	-	-	-	-	na
Hexachlorocyclohexane Gamma-BHC ^c (Lindane)	0	9.5E-01	na	na	1.7E+04	8.7E-01	-	na	1.8E+04	-	-	-	-	8.7E-01	-	na
Hexachlorocyclopentadiene	0	-	-	na	8.8E-01	-	-	na	1.1E+02	-	-	-	-	-	-	na
Hexachloroethane ^c	0	-	2.0E+00	na	-	-	2.0E+00	na	-	-	-	-	-	-	2.0E+00	na
Hydrogen Sulfide	0	-	-	na	4.9E-01	-	-	na	6.2E-01	-	-	-	-	-	-	na
Indeno (1,2,3-cd) pyrene ^c	0	-	-	na	2.6E+04	-	-	na	3.3E+04	-	-	-	-	-	-	na
Iron	0	-	-	na	-	-	-	na	-	-	-	-	-	-	-	na
Isophorone ^c	0	-	0.0E+00	na	-	-	0.0E+00	na	-	-	-	-	-	-	0.0E+00	na
Kepon	0	3.3E+01	3.8E+00	na	-	3.4E+01	3.8E+00	na	-	-	-	-	-	3.4E+01	3.8E+00	na
Lead	0	-	1.0E-01	na	-	-	1.0E-01	na	-	-	-	-	-	-	1.0E-01	na
Malathion	0	-	-	na	-	-	-	na	-	-	-	-	-	-	-	na
Manganese	0	-	-	na	-	-	-	na	-	-	-	-	-	-	-	na
Mercury	0	1.4E+00	7.7E-01	na	5.1E-02	1.4E+00	7.9E-01	na	5.5E-02	-	-	-	-	1.4E+00	7.9E-01	na
Methyl Bromide	0	-	-	na	4.0E+03	-	-	na	4.3E+03	-	-	-	-	-	-	na
Methoxychlor	0	-	3.0E-02	na	-	-	3.1E-02	na	-	-	-	-	-	-	3.1E-02	na
Mirex	0	-	0.0E+00	na	-	-	0.0E+00	na	-	-	-	-	-	-	0.0E+00	na
Monochlorobenzene	0	-	-	na	2.1E+04	-	-	na	2.3E+04	-	-	-	-	-	-	na
Nickel	0	7.8E+01	8.7E+00	na	4.6E+03	8.0E+01	8.9E+00	na	5.0E+03	-	-	-	-	8.0E+01	8.9E+00	na
Nitrate (as N)	0	-	-	na	-	-	-	na	-	-	-	-	-	-	-	na
Nitrobenzene	0	-	-	na	1.9E+03	-	-	na	2.0E+03	-	-	-	-	-	-	na
N-Nitrosodimethylamine ^c	0	-	-	na	8.1E+01	-	-	na	1.0E+02	-	-	-	-	-	-	na
N-Nitrosodiphenylamine ^c	0	-	-	na	1.6E+02	-	-	na	2.0E+02	-	-	-	-	-	-	na
N-Nitrosodi-n-propylamine ^c	0	-	-	na	1.4E+01	-	-	na	1.8E+01	-	-	-	-	-	-	na
Parathion	0	5.5E-02	1.3E-02	na	-	6.8E-02	1.3E-02	na	-	-	-	-	-	6.8E-02	1.3E-02	na
PCB-1016	0	-	1.4E-02	na	-	-	1.4E-02	na	-	-	-	-	-	-	1.4E-02	na
PCB-1221	0	-	1.4E-02	na	-	-	1.4E-02	na	-	-	-	-	-	-	1.4E-02	na
PCB-1232	0	-	1.4E-02	na	-	-	1.4E-02	na	-	-	-	-	-	-	1.4E-02	na
PCB-1242	0	-	1.4E-02	na	-	-	1.4E-02	na	-	-	-	-	-	-	1.4E-02	na
PCB-1248	0	-	1.4E-02	na	-	-	1.4E-02	na	-	-	-	-	-	-	1.4E-02	na
PCB-1254	0	-	1.4E-02	na	-	-	1.4E-02	na	-	-	-	-	-	-	1.4E-02	na
PCB-1260	0	-	1.4E-02	na	-	-	1.4E-02	na	-	-	-	-	-	-	1.4E-02	na
PCB Total ^c	0	-	-	na	1.7E-03	-	-	na	2.1E-03	-	-	-	-	-	-	na

Parameter (ug/l unless noted) ^c	Background Conc.	Water Quality Criteria			Wasteload Allocations			Antidegradation Baseline			Antidegradation Allocations			Most Limiting Allocations		
		Acute	Chronic	HH (PWS)	Acute	Chronic	HH (PWS)	Acute	Chronic	HH (PWS)	Acute	Chronic	HH (PWS)	Acute	Chronic	HH (PWS)
Pentachlorophenol ^c	0	1.0E+01	7.9E+00	na	8.2E+01	na	1.0E+02	-	-	-	-	-	-	1.0E+01	3.0E+00	na
Phenol	0	-	-	na	4.6E+06	-	5.0E+06	-	-	-	-	-	-	-	-	na
Pyrene	0	-	-	na	1.1E+04	-	1.2E+04	-	-	-	-	-	-	-	-	na
Radionuclides (pCi/l except Beta/Photon)	0	-	-	na	-	-	-	-	-	-	-	-	-	-	-	na
Gross Alpha Activity	0	-	-	na	-	-	-	-	-	-	-	-	-	-	-	na
Beta and Photon Activity (mrem/yr)	0	-	-	na	1.5E+01	-	1.8E+01	-	-	-	-	-	-	-	-	na
Strontium-90	0	-	-	na	4.0E+00	-	4.3E+00	-	-	-	-	-	-	-	-	na
Tritium	0	-	-	na	8.0E+00	-	8.8E+00	-	-	-	-	-	-	-	-	na
Selenium	0	2.0E+01	5.0E+00	na	2.0E+04	na	2.2E+04	-	-	-	-	-	-	-	-	na
Silver	0	6.2E-01	-	na	1.1E+04	na	1.2E+04	-	-	-	-	-	-	2.0E+01	5.1E+00	na
Sulfate	0	-	-	na	-	-	-	-	-	-	-	-	-	6.3E-01	-	na
1,1,2,2-Tetrachloroethane ^c	0	-	-	na	-	-	-	-	-	-	-	-	-	-	-	na
Tetrachloroethylene ^c	0	-	-	na	1.1E+02	-	1.4E+02	-	-	-	-	-	-	-	-	na
Thallium	0	-	-	na	8.8E+01	-	1.1E+02	-	-	-	-	-	-	-	-	na
Toluene	0	-	-	na	6.3E+00	-	6.8E+00	-	-	-	-	-	-	-	-	na
Total dissolved solids	0	-	-	na	2.0E+05	-	2.2E+05	-	-	-	-	-	-	-	-	na
Toxaphene ^c	0	7.3E-01	2.0E-04	na	7.5E-03	na	9.5E-03	-	-	-	-	-	-	7.4E-01	2.0E-04	na
Tributyltin	0	4.6E-01	6.3E-02	na	-	-	-	-	-	-	-	-	-	4.7E-01	6.4E-02	na
1,2,4-Trichlorobenzene	0	-	-	na	9.4E+02	-	1.0E+03	-	-	-	-	-	-	-	-	na
1,1,2-Trichloroethane ^c	0	-	-	na	4.2E+02	-	5.3E+02	-	-	-	-	-	-	-	-	na
Trichloroethylene ^c	0	-	-	na	8.1E+02	-	1.0E+03	-	-	-	-	-	-	-	-	na
2,4,6-Trichlorophenol ^c	0	-	-	na	6.5E+01	-	8.2E+01	-	-	-	-	-	-	-	-	na
2-(2,4,5-Trichlorophenoxy) propionic acid (Silvex)	0	-	-	na	-	-	-	-	-	-	-	-	-	-	-	na
Vinyl Chloride ^c	0	-	-	na	-	-	-	-	-	-	-	-	-	-	-	na
Zinc	0	5.0E+01	5.0E+01	na	6.1E+01	na	7.7E+01	-	-	-	-	-	-	5.1E+01	6.2E+01	na

Notes:

- All concentrations expressed as micrograms/liter (ug/l), unless noted otherwise
- Discharge flow is highest monthly average or Form 2C maximum for Industries and design flow for Municipalities
- Metals measured as Dissolved, unless specified otherwise
- "C" Indicates a carcinogenic parameter
- Regular WLAs are mass balances (minus background concentration) using the % of stream flow entered above under Mixing Information.
Antidegradation WLAs are based upon a complete mix.
Antidegradation WLAs are based upon a complete mix.
- Antideg. Baseline = (0.25(WQC - background conc.) + background conc.) for acute and chronic
= (0.1(WQC - background conc.) + background conc.) for human health
- WLAs established at the following stream flows: 1Q10 for Acute, 30Q10 for Chronic Ammonia, 7Q10 for Other Chronic, 30QS for Non-carcinogens.
Harmonic Mean for Carcinogens, and Annual Average for Dioxin. Mixing ratios may be substituted for stream flows where appropriate.

Metal	Target Value (SSTV)
Antimony	4.6E+03
Arsenic	9.2E+01
Barium	na
Cadmium	3.2E-01
Chromium III	2.0E-01
Chromium VI	6.5E+00
Copper	2.1E+00
Iron	na
Lead	2.3E+00
Manganese	na
Mercury	5.5E-02
Nickel	5.3E+00
Selenium	3.1E+00
Silver	2.5E-01
Zinc	2.0E+01

Note: do not use QL's lower than the minimum QL's provided in agency guidance

11/18/2008 5:02:24 PM

Facility = Corning Danville - 001

Chemical = TRC

Chronic averaging period = 4

WLAa = 19

WLAc = 11

Q.L. = 100

samples/mo. = 4

samples/wk. = 1

Summary of Statistics:

observations = 1

Expected Value = 1000

Variance = 360000

C.V. = 0.6

97th percentile daily values = 2433.41

97th percentile 4 day average = 1663.79

97th percentile 30 day average = 1206.05

< Q.L. = 0

Model used = BPJ Assumptions, type 2 data

A limit is needed based on Chronic Toxicity

Maximum Daily Limit = 16.0883226245855

Average Weekly limit = 16.0883226245855

Average Monthly Limit = 11

The data are:

1000

Current limits are protective

11/14/2008 4:56:57 PM

Facility = Corning Danville - 001

Chemical = Dissolved Lead

Chronic averaging period = 4

WLAa = 34

WLAc = 3.8

Q.L. = 1

samples/mo. = 1

samples/wk. = 1

Summary of Statistics:

observations = 8

Expected Value = .624464

Variance = .140384

C.V. = 0.6

97th percentile daily values = 1.51958

97th percentile 4 day average = 1.03897

97th percentile 30 day average = .753137

< Q.L. = 7

Model used = BPJ Assumptions, Type 1 data

No Limit is required for this material

The data are:

0
0
2
0
0
0
0
0
0

11/14/2008 5:05:28 PM

Facility = Corning Danville - 001

Chemical = Dissolved Zinc

Chronic averaging period = 4

WLAa = 51

WLAc = 52

Q.L. = 10

samples/mo. = 1

samples/wk. = 1

Summary of Statistics:

observations = 9

Expected Value = 43.8888

Variance = 693.444

C.V. = 0.6

97th percentile daily values = 106.799

97th percentile 4 day average = 73.0219

97th percentile 30 day average = 52.9323

< Q.L. = 0

Model used = BPJ Assumptions, type 2 data

A limit is needed based on Acute Toxicity

Maximum Daily Limit = 51

Average Weekly limit = 51

Average Monthly Limit = 51

The data are:

224

15

16

14

11

25

25

49

16

Corning - Danville

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Outfall 001 - Effluent Hardness & Temperature Values

Date	Hardness as CaCO ₃
2/23/2004	36
3/21/2004	26
3/23/2004	28
3/25/2004	26
9/14/2004	29
11/11/2004	29
6/1/2005	40
6/19/2005	27
6/21/2005	30
6/23/2005	38
9/21/2005	42
11/16/2005	43
3/2/2006	35
5/23/2006	44
9/21/2006	43
10/22/2006	48
10/24/2006	45
10/26/2006	49
11/28/2006	48
2/19/2007	40
5/21/2007	36
8/27/2007	37
5/5/2008	40
5/7/2008	38
5/9/2008	26

Average Hardness = 36.92

Outfall 901 - Effluent Hardness & Temperature Values

Date	Hardness as CaCO ₃	Effluent Temperature
2/28/2004	20	11
6/9/2005	29	26
8/8/2006	30	28
1/10/2008	33	10
5/28/2008	42	24

90th% Temperature = 27.2
10th% Temperature = 10.4

Outfall 901 Average Hardness = 30.8

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Outfall 001

Date	Temp °C
10-Dec-2003	18
10-Jan-2004	15
10-Feb-2004	13
10-Mar-2004	11
10-Apr-2004	19
10-May-2004	22
10-Jun-2004	27
10-Jul-2004	29
10-Aug-2004	30
10-Sep-2004	30
10-Oct-2004	29
10-Nov-2004	25
10-Dec-2004	22
10-Jan-2005	14
10-Feb-2005	14
10-Mar-2005	14
10-Apr-2005	14
10-May-2005	18
10-Jun-2005	24
10-Jul-2005	28
10-Aug-2005	30
10-Sep-2005	31
10-Oct-2005	31
10-Nov-2005	25
10-Dec-2005	18
10-Jan-2006	16
10-Feb-2006	14
10-Mar-2006	15
10-Apr-2006	18
10-May-2006	20
10-Jun-2006	27
10-Jul-2006	31
10-Aug-2006	31
10-Sep-2006	31
10-Oct-2006	26
10-Nov-2006	23
10-Dec-2006	17
10-Jan-2007	15
10-Feb-2007	15
10-Mar-2007	11
10-Apr-2007	24
10-May-2007	26
10-Jun-2007	26
10-Jul-2007	30
10-Aug-2007	30

Maximum = 31

90th % = 30.6

10th % = 14

Date	Temp °C
10-Sep-2007	31
10-Oct-2007	30
10-Nov-2007	26
10-Dec-2007	17
10-Jan-2008	13
10-Feb-2008	11
10-Mar-2008	13
10-Apr-2008	19
10-May-2008	22
10-Jun-2008	26
10-Jul-2008	30
10-Aug-2008	31
10-Sep-2008	30

Corning - Danville

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Outfall 001 Effluent Oil & Grease Data points

Date	Oil & Grease (as mg/l)
10-Apr-2001	5
10-Jun-2001	0
10-Oct-2001	<1
10-Dec-2001	3
10-Mar-2002	3
10-Oct-2002	<1
10-Dec-2002	<1
10-Mar-2003	<5
10-Jun-2003	2
10-Sep-2003	<1
10-Jan-2004	4
10-Mar-2004	<1
10-Jul-2004	<1
10-Oct-2004	<5
10-Dec-2004	<5
10-Mar-2005	<5
10-Jul-2005	<5
10-Oct-2005	<5
10-Dec-2005	<5
10-Apr-2006	<5
10-Jul-2006	<5
10-Oct-2006	<5
10-Jan-2007	<5
10-Apr-2007	<5
10-Jul-2007	<5
10-Oct-2007	<5
10-Jan-2008	<5
10-Apr-2008	<5
10-Jul-2008	<5
10-Oct-2008	<5

Current Permit Begins

Corning - Danville
VA0001627
Outfall 001

Note: High Flow Wet Season = January-April

Date
10-Jan-2004
10-Feb-2004
10-Mar-2004
10-Apr-2004
10-Jan-2005
10-Feb-2005
10-Mar-2005
10-Apr-2005
10-Jan-2006
10-Feb-2006
10-Mar-2006
10-Apr-2006
10-Jan-2007
10-Feb-2007
10-Mar-2007
10-Apr-2007
10-Jan-2008
10-Feb-2008
10-Mar-2008
10-Apr-2008

Temp °C
15
13
11
19
14
14
14
14
16
14
15
18
15
15
11
24
13
11
13
19

Wet Season

90th% Temp = 19

	Flow Average	Flow Max	pH Min	pH Max	TSS Average	TSS Max	TSS Average	TSS Max
Minimum	NA	NL	6	6	NA	NA	NA	NA
Maximum	NL	NA	9	9	25 kg/day	50 kg/day	NL	NL
Units	MGD	MGD	SU	SU	kg/day	kg/day	mg/l	mg/l
February-01	0.138	0.141	7.17	7.36				
March-01	0.132	0.138	7.16	7.3				
April-01	0.136	0.14	7.19	7.34				
May-01	0.134	0.139	7.22	7.34				
June-01	0.134	0.14	7.24	7.36	0.492	0.492	1	1
July-01	0.166	0.172	7.22	7.31				
August-01	0.179	0.185	7.19	7.32				
September-01	0.166	0.172	7.21	7.33				
October-01	0.143	0.147	7.25	7.36	<0.541	<0.541	<1	<1
November-01	0.142	0.153	7.19	7.32				
December-01	0.15	0.156	7.12	7.26	0.56	0.56	1	1
January-02	0.161	0.237	7.28	7.54				
February-02	0.203	0.432	7.26	7.46				
March-02	0.163	0.182	7.2	7.34	<0.651	<0.651	<1	<1
April-02	0.174	0.202	7.2	7.35				
May-02	0.166	0.174	7.2	7.35				
June-02	0.154	0.186	7.18	7.44				
July-02	0.154	0.182	7.2	7.34				
August-02	0.175	0.223	7.19	7.3				
September-02	0.252	0.443	7.18	7.3				
October-02	0.161	0.241	7.19	7.3	0.511	0.511	1	1
November-02	0.162	0.204	7.2	7.36				
December-02	0.133	0.15	7.22	7.3	<0.568	<0.568	<1	<1
January-03	0.115	0.124	7.19	7.28				
February-03	0.141	0.171	7.16	7.3				
March-03	0.151	0.162	7.18	7.36	0.613	0.613	1	1
April-03	0.154	0.161	7.18	7.36				
May-03	0.187	0.222	7.17	7.32				
June-03	0.186	0.245	7.16	7.3	<0.579	<0.579	<1	<1
July-03	0.159	0.164	7.2	7.34				
August-03	0.157	0.168	7.22	7.36				
September-03	0.163	0.182	7.16	7.31	0.689	0.689	1	1
October-03	0.186	0.202	7.16	7.28				
November-03	0.18	0.185	7.14	7.26				
December-03	0.168	0.181	7.12	7.24				
January-04	0.138	0.144	7.16	7.26	1.817	1.817	4	4
February-04	0.147	0.15	7.14	7.28				
March-04	0.138	0.165	7.18	7.34	4	4	4	4
April-04	0.124	0.145	7.1	7.22				
May-04	0.133	0.122	7.18	7.3				
June-04	0.106	0.112	7.18	7.26	1.11	1.11	1	1
July-04	0.121	0.15	7.18	7.3				
August-04	0.163	0.171	7.16	7.24				
September-04	0.166	0.193	7.16	7.28				

October-04	0.178	0.183	7.18	7.24	1.5	1.5	1	1
November-04	0.106	0.112	7.16	7.26				
December-04	0.099	0.11	7.16	7.26	3.065	3.065	4	4
January-05	0.104	0.11	7.14	7.22				
February-05	0.12	0.182	7.16	7.24				
March-05	0.132	0.175	7.2	7.28	1.457	1.457	1	1
April-05	0.121	0.181	7.16	7.26				
May-05	0.105	0.11	7.16	7.24				
June-05	0.106	0.122	7.16	7.26				
July-05	0.099	0.102	7.16	7.24	0.833	0.833	1	1
August-05	0.154	0.235	7.18	7.24				
September-05	0.075	0.399	7.16	7.24				
October-05	0.365	0.421	7.16	7.26	5.38	5.38	2	2
November-05	0.218	0.342	7.16	7.24				
December-05	0.142	0.146	7.16	7.26	1.157	1.157	1	1
January-06	0.133	0.138	7.16	7.24				
February-06	0.181	0.19	7.14	7.26				
March-06	0.188	0.236	7.18	7.22				
April-06	0.18	0.206	7.18	7.26	<1.7	<1.7	<1	<1
May-06	0.138	0.141	7.18	7.28				
June-06	0.137	0.14	7.18	7.26	<1.17	<1.17	<1	<1
July-06	0.139	0.147	7.16	7.22				
August-06	0.136	0.226	7.16	7.26				
September-06	0.213	0.252	7.16	7.24				
October-06	0.202	0.204	7.16	7.26	1.67	1.67	1	1
November-06	0.205	0.21	7.16	7.26				
December-06	0.134	0.147	7.18	7.24	<1.266	<1.266	<1	<1
January-07	0.186	0.242	7.18	7.26				
February-07	0.174	0.182	7.18	7.28				
March-07	0.272	0.666	7.2	7.3	<1.457	<1.457	<1	<1
April-07	0.188	0.198	7.16	7.26				
May-07	0.188	0.198	7.16	7.24				
June-07	0.188	0.202	7.2	7.26	3.3	3.3	2	2
July-07	0.202	0.21	7.2	7.28				
August-07	0.201	0.21	7.2	7.28				
September-07	0.192	0.208	7.2	7.28	1.45	1.45	1	1
October-07	0.197	0.206	7.2	7.28				
November-07	0.2	0.21	7.16	7.28				
December-07	0.161	0.178	7.16	7.24	<1.25	<1.25	<1	<1
January-08	0.139	0.15	7.2	7.28				
February-08	0.141	0.177	7.22	7.28				
March-08	0.138	0.145	7.18	7.28				
April-08	0.152	0.194	7.18	7.28	1.462	1.462	1.1	1.1
May-08	0.141	0.146	7.18	7.28				
June-08	0.153	0.193	7.18	7.28				
July-08	0.154	0.16	7.2	7.26	<1.208	<1.208	<1	<1
August-08	0.198	0.202	7.22	7.3				
September-08	0.186	0.19	7.2	7.26				

90th% pH =	7.327
10th% pH =	7.16

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Date	Total Iron (lb/day)	
	Monthly Avg	Maximum
10-Apr-2001	0.06	0.06
10-Jun-2001	0.032	0.032
10-Oct-2001	0.027	0.027
10-Dec-2001	0.061	0.061
10-Oct-2002	0.052	0.052
10-Dec-2002	0.033	0.033
10-Mar-2003	0.024	0.024
10-Jun-2003	0.031	0.031
10-Sep-2003	0.07	0.07
10-Jan-2004	0.238	0.238
10-Mar-2004	0.211	0.211
10-Jul-2004	0.143	0.143
10-Oct-2004	0.086	0.086
10-Dec-2004	0.075	0.075
10-Mar-2005	0.093	0.093
10-Jul-2005	0.081	0.081
10-Oct-2005	0.352	0.352
10-Dec-2005	0.081	0.081
10-Apr-2006	0.063	0.063
10-Jul-2006	0.113	0.113
10-Oct-2006	0.264	0.264
10-Jan-2007	0.109	0.109
10-Apr-2007	0.025	0.025
10-Jul-2007	0.16	0.16
10-Oct-2007	0.14	0.14
10-Jan-2008	0.071	0.071
10-Apr-2008	0.094	0.094
10-Jul-2008	0.066	0.066
10-Oct-2008	0.107	0.107

Date	Total Lead (lb/day)	
	Monthly Avg	Maximum
10-Oct-2001	<.0027	<.0027
10-Dec-2001	<.0028	<.0028
10-Mar-2002	0.029	0.029
10-Mar-2002	<.0033	<.0033
10-Oct-2002	<.0026	<.0026
10-Dec-2002	<.0028	<.0028
10-Mar-2003	<.0031	<.0031
10-Jun-2003	<.0029	<.0029
10-Sep-2003	<.0034	<.0034
10-Jan-2004	0.0068	0.0068
10-Jul-2004	0.0033	0.0033
10-Oct-2004	<.0014	<.0014
10-Dec-2004	0.008	0.008
10-Mar-2005	0.0029	0.0029
10-Jul-2005	0.0008	0.0008
10-Oct-2005	0.0108	0.0108
10-Dec-2005	0.004	0.004
10-Apr-2006	<.0017	<.0017
10-Jul-2006	0.0035	0.0035
10-Oct-2006	0.0033	0.0033
10-Jan-2007	0.0013	0.0013
10-Apr-2007	<.0015	<.0015
10-Jul-2007	0.003	0.003
10-Oct-2007	0.003	0.003
10-Jan-2008	0.002	0.002
10-Apr-2008	0.002	0.002
10-Jul-2008	0.0048	0.0048
10-Oct-2008	0.0042	0.0042

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Date	Total Iron (mg/l)	
	Monthly Avg	Maximum
10-Jan-2004	0.523	0.523
10-Mar-2004	0.211	0.211
10-Jul-2004	0.129	0.129
10-Oct-2004	0.057	0.057
10-Dec-2004	0.097	0.097
10-Mar-2005	0.064	0.064
10-Jul-2005	0.097	0.097
10-Oct-2005	0.131	0.131
10-Dec-2005	0.07	0.07
10-Apr-2006	0.037	0.037
10-Jul-2006	0.097	0.097
10-Oct-2006	0.158	0.158
10-Jan-2007	0.086	0.086
10-Apr-2007	0.017	0.017
10-Jul-2007	0.094	0.094
10-Oct-2007	0.098	0.098
10-Jan-2008	0.057	0.057
10-Apr-2008	0.083	0.083
10-Jul-2008	0.055	0.055
10-Oct-2008	0.069	0.069

Date	Total Lead (mg/l)	
	Monthly Avg	Maximum
10-Jan-2004	0.015	0.015
10-Jul-2004	0.003	0.003
10-Oct-2004	<.001	<.001
10-Dec-2004	<.001	<.001
10-Mar-2005	0.002	0.002
10-Jul-2005	<.001	<.001
10-Oct-2005	0.004	0.004
10-Dec-2005	0.003	0.003
10-Apr-2006	<.001	<.001
10-Jul-2006	0.003	0.003
10-Oct-2006	0.002	0.002
10-Jan-2007	0.001	0.001
10-Apr-2007	<.001	<.001
10-Jul-2007	0.002	0.002
10-Oct-2007	0.002	0.002
10-Jan-2008	0.002	0.002
10-Apr-2008	0.002	0.002
10-Jul-2008	0.004	0.004
10-Oct-2008	0.003	0.003

Date	Dissolved Lead (mg/l)	
	Monthly Avg	Maximum
10-Dec-2004	<.001	<.001
10-Mar-2005	<.001	<.001
13-Oct-2005	0.002	0.002
10-Jul-2006	<.001	<.001
11-Dec-2006	<.001	<.001
08-Mar-2007	<.001	<.001
08-Jan-2008	<.001	<.001
10-Mar-2008	<.001	<.001

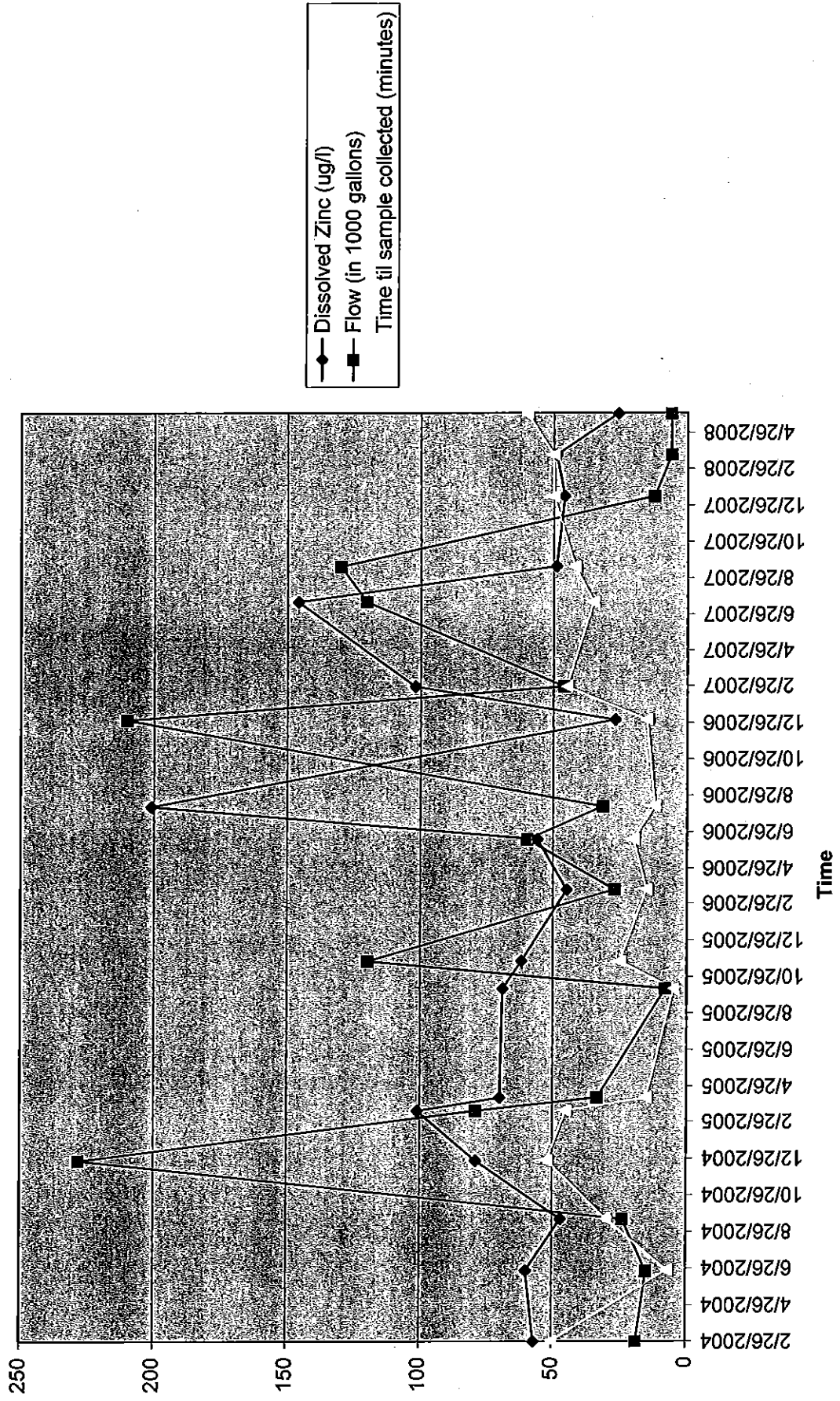
Date	Dissolved Zinc (mg/l)	
	Monthly Avg	Maximum
10-Mar-2004	0.224	0.224
10-Dec-2004	0.015	0.015
10-Mar-2005	0.016	0.016
10-Oct-2005	0.014	0.014
10-Jul-2006	0.011	0.011
10-Jan-2007	0.025	0.025
10-Jul-2007	0.025	0.025
10-Jan-2008	0.049	0.049
10-Jul-2008	0.016	0.016

Corning - Danville
VA0001627
Outfall 901

Precipitation Event Date	Flow in (MG)	Rain Volume (in inches)	Start Time of Precipitation	Duration (Hours)	Start of Commingled Flow / Time of collection	Ti
2/26/04	0.019	0.3	1900	5	1345 / 1435	50
6/23/04	0.0152	0.24	1500	2.75	1530 / 1537	7 n
9/17/04	0.0241	0.38	1315	2	1445 / 1515	30
12/23/04	0.228	0.36	915	2.75	1015 / 1107	52
3/16/05	0.0792	1.25	930	22.5	1330 / 1415	45
4/7/05	0.0336	0.53	1315	3.25	1330 / 1345	15
10/6/05	0.00824	0.13	1505	2.4	1515 / 1520	5 n
11/21/05	0.12	1.9	620	25	0640 / 0705	25
3/21/06	0.0272	0.43	1910	5	2000 / 2015	15
6/14/06	0.06	0.95	730	9	0810 / 0830	20
8/8/06	0.0316	0.5	1530	4.5	1535 / 1547	12
12/31/06	0.21	3.23	800	30	1550 / 1605	15
2/25/07	0.0462	0.71	1320	7	1330 / 1415	45
7/17/07	0.1204	1.85	1640	6	1645 / 1720	35
9/14/07	0.1302	2	1140	11.3	1150 / 1232	42
1/10/08	0.0126	0.2	1230	4.5	1240 / 1330	50
3/20/08	0.0063	0.1	1715	7	1720 / 1810	50
5/28/08	0.0063	0.1	1020	0.833	1110 / 1210	60

Note: 2/26/04 Snow melt discharge event; all other discharge events associated with rain precipitate

Corning Danville Stormwater Data



Corning - Danville

VA0001627

Outfall 001 - Whole Effluent Toxicity (WET) Results

Date	Acute toxicity test Endpoints (NOAEC)
10-Mar-2004	100
10-Jul-2004	100
10-Oct-2004	100
10-Dec-2004	100
10-Apr-2005	100
10-Jul-2005	100
10-Oct-2005	100
10-Dec-2005	100
10-Apr-2006	100
10-Jul-2006	100
10-Oct-2006	100
10-Jan-2007	100
10-Apr-2007	100
10-Jul-2007	100
10-Oct-2007	100
10-Jan-2008	100
10-Apr-2008	100
10-Jul-2008	100
10-Oct-2008	100

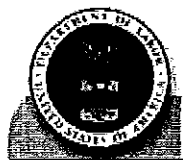
Date	Chronic toxicity test Endpoints (NOEC)
21-Mar-05	NOEC = 99%
19-Jun-05	NOEC = 99%
22-Oct-06	NOEC = 99%
5-May-08	NOEC = 99%

Corning - Danville

VA0001627

Outfall 901 - Stormwater Acute Effluent Toxicity Test Results

Date	Acute toxicity test Endpoints (LC ₅₀)
2/28/2004	LC ₅₀ = 100%
6/9/2005	LC ₅₀ = 100%
8/8/2006	LC ₅₀ = 100%
1/10/2008	LC ₅₀ = 100%
5/28/2008	LC ₅₀ = 100%

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**SIC Description for 3229****Description for 3229: Pressed and Blown Glass and Glassware,
Not Elsewhere Classified**Division D: ManufacturingMajor Group 32: Stone, Clay, Glass, And Concrete ProductsIndustry Group 322: Glass And Glassware, Pressed Or Blown3229 Pressed and Blown Glass and Glassware, Not Elsewhere Classified

Establishments primarily engaged in manufacturing glass and glassware, not elsewhere classified, pressed, blown, or shaped from glass produced in the same establishment. Establishments primarily engaged in manufacturing textile glass fibers are also included in this industry, but establishments primarily engaged in manufacturing glass wool insulation products are classified in Industry 3296. Establishments primarily engaged in manufacturing fiber optic cables are classified in Industry 3357, and those manufacturing fiber optic medical devices are classified in Industry Group 384. Establishments primarily engaged in the production of pressed lenses for vehicular lighting, beacons, and lanterns are also included in this industry, but establishments primarily engaged in the production of optical lenses are classified in Industry 3827. Establishments primarily engaged in manufacturing glass containers are classified in Industry 3221, and those manufacturing complete electric light bulbs are classified in Industry 3641.

- Art glassware, made in glassmaking plants
- Ashtrays, glass
- Barware, glass
- Battery jars, glass
- Blocks, glass
- Bowls, glass
- Bulbs for electric lights, without filaments or sockets-mitse
- Candlesticks, glass
- Centerpieces, glass
- Chimneys, lamp: glass-pressed or blown
- Christmas tree ornaments, from glass-mitse
- Clip cups, glass
- Cooking utensils, glass and glass ceramic
- Drinking straws, glass
- Fiber optics strands
- Fibers, glass, textile
- Flameware, glass and glass ceramic
- Frying pans, glass and glass ceramic
- Glass blanks for electric light bulbs
- Glass brick
- Glassware, except glass containers for packing, bottling, and canning
- Glassware: art, decorative, and novelty
- Goblets, glass
- Illuminating glass: light shades, reflectors, lamp chimneys, and globes
- Industrial glassware and glass products, pressed or blown
- Ink-Wells, glass

- Insulators, electrical: glass
- Lamp parts, glass
- Lamp shades, glass
- Lantern globes, glass: pressed or blown
- Lens blanks, optical and ophthalmic
- Lenses, glass: for lanterns, flashlights, headlights, and searchlights
- Level vials for instruments, glass
- Light shades, glass: pressed or blown
- Lighting glassware, pressed or blown
- Novelty glassware: made in glassmaking plants
- Ophthalmic glass, except flat
- Optical glass blanks
- Photomask blanks, glass
- Reflectors for lighting equipment, glass: pressed or blown
- Refrigerator dishes and jars, glass
- Scientific glassware, pressed or blown: made in glassmaking plants
- Stemware, glass
- Tableware, glass and glass ceramic
- Tea kettles, glass and glass ceramic
- Technical glassware and glass products, pressed or blown
- Television tube blanks, glass
- Textile glass fibers
- Tobacco jars, glass
- Trays, glass
- Tubing, glass
- Tumblers, glass
- Vases, glass
- Yarn, fiberglass: made in glass plants

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Occupational Safety & Health Administration
200 Constitution Avenue, NW
Washington, DC 20210

shall achieve the following effluent limitations representing the degree of effluent reduction attainable by the application of the best conventional pollutant control technology (BCT): The limitations shall be the same as those specified for conventional pollutants (which are defined in §401.16) in §426.82 of this subpart for the best practicable control technology currently available (BPT).

[51 FR 25000, July 9, 1986]

Subpart I—Machine Pressed and Blown Glass Manufacturing Subcategory [Reserved]



[top](#)

Subpart J—Glass Tubing (Danner) Manufacturing Subcategory



[top](#)

Source: 40 FR 2957, Jan. 16, 1975, unless otherwise noted.

§ 426.100 Applicability; description of the glass tubing (Danner) manufacturing subcategory.



[top](#)

The provisions of this subpart are applicable to discharges resulting from the process by which raw materials are melted in a furnace and glass tubing mechanically drawn from the furnace horizontally by means of the Danner process, which requires the intermittent quenching of cullet.

§ 426.101 Specialized definitions.



[top](#)

For the purpose of this subpart:

- (a) Except as provided below, the general definitions, abbreviations and methods of analysis set forth in part 401 of this chapter shall apply to this subpart.
- (b) The term "furnace pull" shall mean that amount of glass drawn from the glass furnace or furnaces.
- (c) The term "cullet" shall mean any excess glass generated in the manufacturing process.

§ 426.102 Effluent limitations guidelines representing the degree of effluent reduction attainable by the application of the best practicable control technology currently available.



[top](#)

Enforcement/Compliance Record

VA0001627

Year	Month	Outfall	Item	Requirement	Reported	WL/NOV
2004	MAR	001	Compliance schedule: Storm Water - Pollution Prevention Plan	03/10/2004		
2004	MAR	001	Compliance schedule: VERIFY EXISTING OR SUBMIT NEW O&M MANUAL	03/10/2004	04/09/2004	
2006	JUL	001	DMR due 08/10/2006 missing DMR.			
2007	JAN	001	Potential for adverse impalct or loss of beneficial use			W2007-03-L-1009
2007	JAN	001	Unauthorized discharge to Rutledge Creek 1-29- 07			W2007-03-L-1009
2008	JUN	001	Compliance schedule: SUBMIT VPDES PERMIT APPLICATION BEFORE 180 DAYS PRIOR TO PERMIT EXPIRATION	06/05/2008		
2005	APR	901	Compliance schedule: TMP - First Annual Acute:Deemed Incomplete	05/10/2004	03/16/2004	
2005	NOV	901	Late Submittal of DMR	10-DEC-05	16-DEC-05	
2006	JUL	901	DMR due 08/10/2006 missing DMR.			
2006	SEP	901	Late Submittal of DMR	10-OCT-06	18-OCT-06	
2008	MAY	901	Compliance schedule: TMP - Fifth Annual Acute	05/10/2008		

ATTACHMENT 8

SPECIAL CONDITIONS RATIONALE

**VPDES PERMIT PROGRAM
LIST OF SPECIAL CONDITIONS RATIONALE**

Name of Condition:

B. WET SCHEDULE AND LIMITATION

Rationale: Required by the State Water Control Law, Section 62.1-44.15(3a) and the State's Water Quality Standards (9 VAC 25-260-20). In addition, the VPDES Permit Regulation, 9 VAC 25-31-220 D. and 40 CFR 122.44(d) require limits necessary to meet water quality standards. In accordance with the VPDES Permit Regulation, 9 VAC 25-31-250, and 40 CFR 122.47, the permit may, when appropriate, specify a schedule of compliance leading to compliance with the Clean Water Act, laws and regulations. See Attachment 7 of this fact sheet for additional justification.

C. SCHEDULE OF COMPLIANCE

Rationale: In accordance with the VPDES Permit Regulation, 9 VAC 25-31-250, and 40 CFR 122.47, the permit may, when appropriate, specify a schedule of compliance leading to compliance with the Clean Water Act, laws and regulations.

D. OTHER REQUIREMENTS OR SPECIAL CONDITIONS

1. Water Quality Criteria Reopener

Rationale: The VPDES Permit Regulation, 9 VAC 25-31-220 D., Water Quality Standards and State Requirements, requires that the permit include limits to achieve water quality standards, including the narrative criteria. 40 CFR Part 131, Water Quality Standards, requires the state to adopt water quality criteria to protect designated water uses (subpart 131.11), and review, modify and adopt water quality standards periodically (subpart 131.20). Section 302 of the Clean Water Act authorizes effluent limitations to be established which will contribute to the attainment or maintenance of the water quality.

2. Licensed Wastewater Operator Requirement

Rationale: The VPDES Permit Regulation, 9 VAC 25-31-200 D., requires the permittee to employ or contract at least one wastewater works operator who holds a current wastewater license for the permitted facility. The Code of Virginia 54.1-2300 et seq., Rules and Regulations for Waterworks and Wastewater Works Operators (18 VAC 160-20-10 et seq.) requires licensure of operators. In addition, the Sewerage Collection and Treatment Regulations (12 VAC 5-581-10 et seq.), recommends a manning and classification schedule for domestic wastewater treatment plant operators, based on plant capacity and specific treatment types.

Based on the size and type of treatment facility, no licensed wastewater operator is required.

3. Operations & Maintenance (O & M) Manual

Rationale: The State Water Control Law, Section 62.1-44.16 requires the submittal of pertinent plans, specifications, maps and such other relevant information as may be required and Section 62.1-44.21 allows requests for any information necessary to determine the effect of the discharge on state waters. Required by the VPDES Permit Regulation, 9 VAC 25-31-190 E. Section 401 of the Clean Water Act requires the permittee to provide opportunity for the state to review the proposed operations of the facility. In addition, 40 CFR 122.41(e) requires the permittee, at all times, to properly operate and maintain all facilities and systems of treatment and control (and related appurtenances) in order to achieve compliance with the permit (includes laboratory controls and QA/QC).

4. Notification Levels

Rationale: The VPDES Permit Regulation, 9 VAC 25-31-200 A. and 40 CFR 122.42 (a) require notification of the discharge of certain parameters at or above specific concentrations for all manufacturing, commercial, mining and silvicultural discharges.

5. Compliance Reporting Under Part I.A.

Rationale: Authorized by the VPDES Permit Regulation, 9 VAC 25-31-190 J.4. and 220 I. This condition is necessary when toxic pollutants are monitored by the permittee and a maximum level of quantification and/or a specific analytical method is required in order to assess compliance with a permit limit or to compare effluent quality with a numeric criterion. The condition also establishes protocols for calculation of reported values.

6. Materials Handling and Storage

Rationale: The VPDES Permit Regulation, 9 VAC 25-31-50 A., prohibits the discharge of any wastes into State waters unless authorized by permit. The State Water Control Law, Sec. 62.1-44.16 and 17 authorizes the Board to regulate the discharge of industrial or other wastes. Section 301 of the Clean Water Act prohibits the discharge of any pollutant unless it complies with specific sections of the Act.

7. Effluent Monitoring Frequencies

Rationale: The permittee is granted a reduction in monitoring frequency based on a history of permit compliance. To remain eligible for the reduction, the permittee should not have violations that result in enforcement actions. If the permittee fails to maintain the previous level of performance, the baseline monitoring frequencies should be reinstated. The incentive for reduced monitoring is an effort to reduce the cost of environmental compliance and to provide incentives to facilities which demonstrate outstanding performance and consistent compliance with their permits. Facilities which cannot comply with specific effluent parameters or have other related violations will not be eligible for this benefit. This is in conformance with Guidance Memorandum No. 98-2005 - Reduced Monitoring and EPA's proposed "Interim Guidance For Performance-Based Reduction of NPDES Permit Monitoring Frequencies" (EPA 833-B-96-001) published in April 1996.

8. Cooling Water and Boiler Additives

Rationale: Chemical additives may be toxic or otherwise violate the receiving stream water quality standards. Upon notification, the regional office can determine if this new additive will warrant a modification to the permit.

9. Minimum Freeboard

Rationale: Minimize the discharge of untreated wastewater to the groundwater or surface waters.

10. Hydrostatic Testing

Rationale: Hydrostatic test water discharges are potentially contaminated with facility products and, therefore, qualify for permit coverage under the State Water Control Law and the Clean Water Act.

11. Permit Application Requirement

Rationale: The VPDES Permit Regulation, 9 VAC 25-31-100 D. and 40 CFR 122.21 (d)(1) require a new application at least 180 days prior to expiration of the existing permit. In addition, the VPDES Permit Regulation, 9 VAC 25-31-100 E.1. and 40 CFR 122.21 (e)(1) note that a permit shall not be issued before receiving a complete application.

E. TOXICS MANAGEMENT PROGRAM (TMP)

Rationale: The VPDES Permit Regulation, 9 VAC 25-31-210 and 220 I., and 40 CFR 122.44(d) require monitoring in the permit to provide for and assure compliance with all applicable requirements of the Clean Water Act and the State Water Control Law. See additional justification included in this attachment.

F. STORM WATER MANAGEMENT CONDITIONS

Rationale: Required by the VPDES Permit Regulation. Section 9 VAC 25-31-10 defines discharges of storm water from industrial activity and includes 11 industrial categories [9 of which are covered by the VPDES general permit for discharges of storm water associated with industrial activity (9 VAC 25-151-10 et seq.)] Included in the covered categories are municipal treatment plants with a design flow of 1.0 MGD or more, or plants with approved pretreatment programs, as discharges of storm water associated with industrial activity. Section 9 VAC 25-31-120 requires a permit for all these discharges associated with an industrial activity. The storm water pollution prevention plan requirements are derived from the VPDES general permit 9 VAC 25-151-10 et seq., which is based on the EPA storm water multi-sector general permit for industrial activities.

1. General Storm Water Conditions

a. Sample Type

Rationale: This stipulates the proper sampling methodology for qualifying rain events from regulated storm water outfalls. Use of this condition is a BPJ determination and is based on the VPDES general permit for discharges of storm water associated with industrial activity, 9 VAC 25-151-10 et seq.

b. Recording of Results - Storm Event Data

Rationale: This sets forth the information which must be recorded and reported for each storm event sampling (ie. date and duration event, rainfall measurement, and duration between qualifying events). It requires the maintenance of daily rainfall logs which are to be reported. It also provides guidance for when there is no effluent to sample during a given period. Use of this condition is a BPJ determination and is based on the VPDES general permit for discharges of storm water associated with industrial activity, 9 VAC 25-151-10 et seq.

c. Monitoring Waivers

Rationale: This condition allows the permittee to collect substitute samples of qualifying storm events in the event of adverse climatic conditions. Use of this condition is a BPJ determination and is based on the VPDES general permit for discharges of storm water associated with industrial activity, 9 VAC 25-151-10 et seq.

d. Representative Outfalls

Rationale: This condition allows the permittee to submit the results of sampling from one outfall as representative of other similar outfalls, provided the permittee can demonstrate that the outfalls are substantially identical. Use of this condition is a BPJ determination and is based on the VPDES general permit for discharges of storm water associated with industrial activity, 9 VAC 25-151-10 et seq.

e. Quarterly Visual Monitoring of Storm Water Quality

Rationale: This condition requires that visual examinations of storm water outfalls take place at a specified frequency and sets forth what information needs to be checked and documented. These examinations assist with the evaluation of the pollution prevention plan by providing a simple, low cost means of assessing the quality of storm water discharge with immediate feedback. Use of this condition is a BPJ determination and is based on the VPDES general permit for discharges of storm water associated with industrial activity, 9 VAC 25-151-10 et seq.

f. Allowable Non-storm Water Discharges

Rationale: This condition requires that the storm water pollution prevention plan identify specified non-storm water discharges and ensure the implementation of appropriate pollution prevention measures for each of the non-storm water components of the discharge. Where these classes of non-storm water discharges are identified in the plan and where appropriate pollution prevention measures are evaluated, identified and implemented, they generally pose low risks to the environment. Also, identification of these discharges in the plan negates the need to cover them under a separate VPDES permit. Flows from fire fighting activities do not need to be identified in the plan due to the emergency nature of such discharges coupled with their low probability and the unpredictability of their occurrence. Use of this condition is a BPJ determination and is based on the VPDES general permit for discharges of storm water associated with industrial activity, 9 VAC 25-151-10 et seq.

g. Releases of Hazardous Substances or Oil in Excess of Reportable Quantities

Rationale: This condition requires that the discharge of hazardous substances or oil from a facility be eliminated or minimized in accordance with the facility's storm water pollution prevention plan. If there is a discharge of a material in excess of a reportable quantity, it establishes the reporting requirements in accordance with state laws and federal regulations. In addition, the pollution prevention plan for the facility must be reviewed and revised as necessary to prevent a reoccurrence of the spill. Use of this condition is a BPJ determination and is based on the VPDES general permit for discharges of storm water associated with industrial activity, 9 VAC 25-151-10 et seq.

h. Additional Requirements for Salt Storage

Rationale: This condition requires that storage piles of salt be covered except during those times when salt is either being added or removed. This is to prevent exposure to precipitation that could result in a brine discharge to surface waters which would be detrimental to the aquatic environment. If the runoff is collected and not discharged to surface waters, the facility is exempt from this requirement. Use of this condition is a BPJ determination and is based on the VPDES general permit for discharges of storm water associated with industrial activity, 9 VAC 25-151-10 et seq.

2. Storm Water Pollution Prevention Plan (SWPPP)

Rationale: The Clean Water Act 402(p)(2)(B) requires permits for storm water discharges associated with industrial activity. VPDES permits for storm water discharges must establish BAT/BCT requirements in accordance with 402(p)(3) of the Act. The Storm Water Pollution Prevention Plan is the vehicle proposed by EPA in the NPDES Baseline Industrial Storm Water General Permit (published in the Federal Register September 9, 1992) to meet the requirements of the Act. Additionally, the VPDES Permit Regulation, 9 VAC 25-31-220 K., and 40 CFR 122.44 (k) allow BMPs for the control of pollutants where numeric limits are infeasible or BMPs are needed to accomplish the purpose/intent of the law.

3. Facility-specific Storm Water Management Conditions

Rationale: These conditions set forth additional site-specific storm water pollution prevention plan requirements. Use of this condition is a BPJ determination and is based on the VPDES general permit for discharges of storm water associated with industrial activity, 9 VAC 25-151-10 et seq.

Part II CONDITIONS APPLICABLE TO ALL VPDES PERMITS

The VPDES Permit Regulation, 9 VAC 25-31-190, and 40 CFR 122, require all VPDES permits to contain or specifically cite the conditions listed.

MEMORANDUM

VIRGINIA DEPARTMENT OF ENVIRONMENTAL QUALITY SOUTH CENTRAL REGIONAL OFFICE WATER DIVISION

TMP Review LAST
REISSUANCE KS

7705 Timberlake Road

Lynchburg, VA 24502

SUBJECT: CORNING INCORPORATED – DANVILLE, VPDES PERMIT # VA0001627,
TOXICS MANAGEMENT PROGRAM TECHNICAL DATA REVIEW

TO: Bob Goode, Water Permits Manager - SCRO

FROM: Kirk Batsel, Sr. Environmental Engineer - SCRO KS

DATE: September 25, 2003

COPIES: Permit file

General Background

The VPDES permit for the subject facility is currently in the process of reissuance. The permit was last reissued on November 17, 1998 and has an expiration date of November 17, 2003.

Based on past results of acute toxicity tests, a WET limitation of 1.0 TUa was included in the subject permit. Vertebrate and invertebrate indicator organisms are alternated for WET testing. During the last reissuance, potentially contaminated stormwater was included as part of the subject facility's discharge. Initial acute "Wet Weather" toxicity testing, using C. dubia, was required in the current permit. Since the facility has a continuous process discharge, annual chronic toxicity testing using, P. promelas, was carried forward in the current permit.

Critical flows for the receiving stream, Rutledge Creek, for Outfall 001, and for limitation determination include:

Plant Flow: 0.443 MGD (Max Daily, 2C)	1-Day/10-Year High Flow: 0.02585 MGD
7-Day/10-Year Low Flow: 0.10341 MGD	30-Day/5-Year Low Flow: 0.33608 MGD
7-Day/10-Year High Flow: 0.03231 MGD	Harmonic Mean Flow: 0.07109 MGD
1-Day/10-Year Low Flow: 0.00517 MGD	IWC = 99%

Data Summary

A total of seventeen (17) acute and three (3) chronic toxicity tests were evaluated during this technical review.

Acute Dry Weather Whole Effluent Toxicity (WET) Limitation

Nine (9) acute WET limitation toxicity tests conducted during the current permit term were evaluated during this review. All tests evaluated were conducted by James R. Reed & Associates and were valid. The tests consisted of five (5) vertebrate, P. promelas, and four (4) invertebrate, C. dubia, acute toxicity tests. All tests resulted in LC50 values >100% effluent or TU_c values <1.0.

Please refer to Table 1 for summary of toxicity test results.

Table 1.

Test Date	Test Organism	LC ₅₀ (%)	% Survival in 100% effluent	TOC	Testing Laboratory
01/99	<i>C. dubia</i>	>100	100	<1.0	J. R. Reed
05/99	<i>P. promelas</i>	>100	95	<1.0	J. R. Reed
08/99	<i>C. dubia</i>	>100	100	<1.0	J. R. Reed
11/99	<i>P. promelas</i>	>100	100	<1.0	J. R. Reed
02/00	<i>C. dubia</i>	>100	100	<1.0	J. R. Reed
06/00	<i>P. promelas</i>	>100	95	<1.0	J. R. Reed
09/00	<i>C. dubia</i>	>100	100	<1.0	J. R. Reed
12/00	<i>P. promelas</i>	>100	100	<1.0	J. R. Reed
03/01	<i>C. dubia</i>	>100	100	<1.0	J. R. Reed
06/01	<i>P. promelas</i>	>100	100	<1.0	J. R. Reed
09/01	<i>C. dubia</i>	>100	100	<1.0	J. R. Reed
11/01	<i>P. promelas</i>	>100	95	<1.0	J. R. Reed
02/02	<i>C. dubia</i>	>100	100	<1.0	J. R. Reed
06/02	<i>P. promelas</i>	>100	100	<1.0	J. R. Reed
09/02	<i>C. dubia</i>	>100	100	<1.0	J. R. Reed
11/02	<i>P. promelas</i>	>100	100	<1.0	J. R. Reed
02/03	<i>C. dubia</i>	>100	100	<1.0	J. R. Reed
05/03	<i>P. promelas</i>	>100	100	<1.0	J. R. Reed

Note: Bold tests, reviewed during this technical review.

Chronic Effluent Toxicity Tests

A total of three (3) chronic toxicity tests conducted during the current permit term were evaluated during this review. All tests evaluated were conducted by James R. Reed & Associates and were valid. All of the tests utilized the vertebrate indicator organism, *P. promelas*. All tests resulted in NOEC values =99% effluent. Please refer to Table 2 for a summary of toxicity test results.

Table 2. Chronic Toxicity (dry weather) Test Results for Corning Incorporated - Danville Plant; VA0001627, Outfall 001

Date of test	Invertebrate LC50 %	Vertebrate LC50 %	Invertebrate NOEC %	Vertebrate NOEC %
1/19/99				50%Invalid
11/9/99				99 %
7/14/01				99 %
9/18/01				99 %
7/16/02				99 %

Note: Bold Tests, Reviewed in this technical review.

Acute "Wet Weather" Efflu Toxicity Tests

Eight (8) acute storm "wet weather" toxicity tests conducted during the current permit term were evaluated during this review. All of the toxicity tests evaluated were conducted by James R. Reed & Associates. Tests completed in May 2003 were invalid due to the sample being collected from a discharge that occurred less than 72 hours from the previously measured stormwater discharge event. All other tests reviewed were valid. The valid tests consisted of five (5) vertebrate, *P. promelas*, and three (3) invertebrate, *C. dubia*, acute toxicity tests. The September 2001 acute invertebrate test resulted in a calculable LC50 value of 70.21% effluent (1.41 TU_a). The retest invertebrate test, conducted in December 2001, also resulted in a calculable LC50 value of 25% effluent (4 TU_a). As a result, semiannual acute "wet weather" tests using both indicator species were required in accordance with the permit. To date all semiannual tests (3 sets) have resulted in LC50 values >100% effluent or TU_c values <1.0. Refer to Table 3 for acute "wet weather" toxicity tests conducted to date.

Table 3. Acute Toxicity (wet weather) Test Results for Corning Incorporated – Danville Plant; VA0001627, Outfall 001

Test Date	Test Organism	LC ₅₀ (%)	% Survival in 100% Effluent	Testing Laboratory
09/98	<i>C. dubia</i>	100	100%	J. R. Reed
12/99	<i>C. dubia</i>	100	100%	J. R. Reed
03/01	<i>C. dubia</i>	31.37	5%	J. R. Reed
09/01	<i>C. dubia</i>	70.71	0%	J. R. Reed
12/01	<i>C. dubia</i>	25%	0%	J. R. Reed
05/02	<i>C. dubia</i>	100	75%	J. R. Reed
05/02	<i>P. promelas</i>	100	100%	J. R. Reed
10/02	<i>C. dubia</i>	100	100%	J. R. Reed
10/02	<i>P. promelas</i>	100	100%	J. R. Reed
06/03	<i>C. dubia</i>	100	100%	J. R. Reed
06/03	<i>P. promelas</i>	100	100%	J. R. Reed

Note: Bold Tests, Reviewed in this technical review.

Discussion

WET Limitation

Definitive acute WET tests conducted on dry weather outfall 001 effluent during the current permit term have all resulted in LC50 values >100% effluent. Based on this performance, and in order to reduce compliance test costs, it is considered appropriate to allow the facility to begin utilizing the No Observed Adverse Effect Concentration (NOAEC), 2-dilution acute, toxicity test for WET limitation compliance testing. This test only requires a control and a 100% dilution to be analyzed. Compliance is then based on the presence or absence of a statistical difference between the 100% effluent concentration and the control. Compliance is determined by a pass (NOAEC=100%) or a fail (NOAEC <100%). Quarterly acute WET NOAEC tests, using alternating test species is recommended.

Chronic Toxicity Testing

The chronic toxicity tests conducted during the current permit term have resulted in NOEC values equal to 99% effluent. During the current permit term, all tests utilized the vertebrate, *P. promelas*. With this reissuance, it is recommended that annual chronic tests be included in the subject permit to demonstrate that the discharge is not having a chronic toxicity impact on the receiving stream. However, it is recommended that testing be alternated between the vertebrate and invertebrate indicator organisms.

Wet Weather Testing

Acute definitive wet-weather toxicity tests conducted during the term of the current permit did indicate acute effluent toxicity during 2001. However, and in response to these results, the facility went through employee training, and housekeeping initiatives, which appear to have improved the quality of stormwater discharged from the site as demonstrated by the last three (3) sets of semiannual tests. Based on the results of tests generated, it appears that the invertebrate organism is the most sensitive species (MSS). Therefore, with this issuance it is recommended that semiannual wet weather tests be included in the stormwater management condition of the permit utilizing only the invertebrate indicator organism. These tests can be used a tool in conjunction with the implementation of the facility's Storm Water Pollution Prevention Plan (SP3).

Conclusions/Recommendations

- 1) Based on the above discussion, it is recommended that the facility be allowed to utilize the acute NOAEC, 2-dilution, pass/fail toxicity test as a compliance test for the WET limitation. The resulting WET limitation is expressed a minimum, NOAEC, equal to 100% effluent.
- 2) It is recommend that an annual, chronic, compliance toxicity test, alternating between the vertebrate and invertebrate indicator organism, be carried forward with this permit reissuance.
- 3) It is recommended that semiannual wet weather tests be included in the stormwater management condition of the permit utilizing only the invertebrate indicator organism.

ATTACHMENT 9

MATERIAL STORED

Tier Two Emergency and Hazardous Chemical Inventory Reporting Period From January 1 to December 31, 2007

Page 1 of 9

Facility Identification Name Corning Incorporated 934 Street 265 Corning Drive City Danville County Pittsylvania State VA Zip 24541-6262 Latitude 36.3240 Longitude 79.2740 Country USA		Owner/Operator Name Name Corning Incorporated Phone 607-974-6911 Mailing Address One Riverfront Plaza City Corning State NY Zip 14831 Country USA	
Mailing Address (if different from facility address) Street City State Zip SIC Code 3229 Dun & Brad Number 00-130-7735		Emergency Contact Name Chuck Boucher Title Operations Manager Phone 434-797-6318 24 Hr. Phone Name Pete Aagaard Title Plant Manager Phone 434-797-6334 24 Hr. Phone	
Chemical Description <input type="checkbox"/> Check if all of the information for this chemical is identical to the information submitted last year CAS 1344-28-1 Trade Secret <input type="checkbox"/> Chem. Name ALUMINA - calcined Check All That Apply: <input checked="" type="checkbox"/> Pure <input type="checkbox"/> Mix <input checked="" type="checkbox"/> Solid <input type="checkbox"/> Liquid <input type="checkbox"/> Gas <input type="checkbox"/> EHS		Physical and Health Hazards <input type="checkbox"/> Fire <input type="checkbox"/> Sudden Release of Pressure <input type="checkbox"/> Reactivity <input type="checkbox"/> Immediate (acute) <input checked="" type="checkbox"/> Delayed (chronic)	
<input type="checkbox"/> Check if all of the information for this chemical is identical to the information submitted last year CAS 21645-51-2 Trade Secret <input type="checkbox"/> Chem. Name ALUMINA - hydrated Check All That Apply: <input checked="" type="checkbox"/> Pure <input type="checkbox"/> Mix <input checked="" type="checkbox"/> Solid <input type="checkbox"/> Liquid <input type="checkbox"/> Gas <input type="checkbox"/> EHS		Inventory Container Type J Pressure 1 Temperature 4 Inventory 05 Max. Daily Amount (code) 1/2 in building "A"; 1/2 in building "C" 04 Avg. Daily Amount (code) 365 No. of Days On-site (days)	
Storage Codes and Locations (Non-Confidential)		Storage Codes and Locations (Non-Confidential)	

Certification (Read and sign after completing all sections)

I certify under penalty of law that I have personally examined and am familiar with the information submitted in pages one through 9, and that based on my inquiry of those individuals responsible for obtaining this information, I believe that the submitted information is true, accurate, and complete.

Peter J. Aagaard

Name and official title of owner/operator
OR owner/operator's authorized representative

Signature

Date signed 2/5/2008

Optional Attachments

- ☒ I have attached a site plan
☐ I have attached a list of site coordinate abbreviations
☐ I have attached a description of dikes and other safeguards measures

Chemical Description		Physical and Health Hazards		Inventory	Container Type	Pressure	Temperature	Storage Codes and Locations (Non-Confidential)
<input type="checkbox"/> Check if all of the information for this chemical is identical to the information submitted last year CAS 7784-18-1 ALUMINUM FLUORIDE Trade Secret <input type="checkbox"/>		<input type="checkbox"/> Fire <input type="checkbox"/> Sudden Release of Pressure <input type="checkbox"/> Reactivity <input type="checkbox"/> Immediate (acute) <input checked="" type="checkbox"/> Delayed (chronic)	<input type="checkbox"/> Max. Daily Amount (code) 04 <input type="checkbox"/> Avg. Daily Amount (code) 04 <input type="checkbox"/> No. of Days On-site (days) 365	J	1	4	1/2 in building "A"; 1/2 in building "C"	
<input checked="" type="checkbox"/> Check if all of the information for this chemical is identical to the information submitted last year CAS 7784-27-2 ALUMINUM NITRATE SOLUTION 60% Trade Secret <input type="checkbox"/>		<input type="checkbox"/> Fire <input type="checkbox"/> Sudden Release of Pressure <input type="checkbox"/> Reactivity <input checked="" type="checkbox"/> Immediate (acute) <input checked="" type="checkbox"/> Delayed (chronic)	<input type="checkbox"/> Max. Daily Amount (code) 04 <input type="checkbox"/> Avg. Daily Amount (code) 03 <input type="checkbox"/> No. of Days On-site (days) 365	C	1	4	3/4 in tank inside building "B"	
<input checked="" type="checkbox"/> Check if all of the information for this chemical is identical to the information submitted last year CAS 1341-49-7 AMMONIUM BIFLUORIDE, SOLID Trade Secret <input type="checkbox"/>		<input type="checkbox"/> Fire <input type="checkbox"/> Sudden Release of Pressure <input checked="" type="checkbox"/> Reactivity <input checked="" type="checkbox"/> Immediate (acute) <input type="checkbox"/> Delayed (chronic)	<input type="checkbox"/> Max. Daily Amount (code) 03 <input type="checkbox"/> Avg. Daily Amount (code) 03 <input type="checkbox"/> No. of Days On-site (days) 365	J	1	4	Building "B"	
<input checked="" type="checkbox"/> Check if all of the information for this chemical is identical to the information submitted last year CAS 1330-43-4 ANHYDROUS BORAX Trade Secret <input type="checkbox"/>		<input type="checkbox"/> Fire <input type="checkbox"/> Sudden Release of Pressure <input type="checkbox"/> Reactivity <input type="checkbox"/> Immediate (acute) <input checked="" type="checkbox"/> Delayed (chronic)	<input type="checkbox"/> Max. Daily Amount (code) 04 <input type="checkbox"/> Avg. Daily Amount (code) 04 <input type="checkbox"/> No. of Days On-site (days) 365	J	1	4	1/2 in building "A"; 1/2 in building "C"	

Chemical Description		Physical and Health Hazards		Inventory	Container Type	Pressure	Temperature	Storage Codes and Locations (Non-Confidential)
<input checked="" type="checkbox"/> Check if all of the information for this chemical is identical to the information submitted last year CAS 1303-86-2 Chem. Name ANHYDROUS BORIC ACID Trade Secret <input type="checkbox"/>		<input type="checkbox"/> Fire <input type="checkbox"/> Sudden Release of Pressure <input checked="" type="checkbox"/> Reactivity <input type="checkbox"/> Immediate (acute) <input checked="" type="checkbox"/> Delayed (chronic)	<input type="checkbox"/> Max. Daily Amount (code) 04 <input type="checkbox"/> Avg. Daily Amount (code) 04 <input type="checkbox"/> No. of Days On-site (days) 365	J	1	4	1/2 in building "A"; 1/2 in building "C"	
<input type="checkbox"/> Check if all of the information for this chemical is identical to the information submitted last year CAS 1309-64-4 Chem. Name ANTIMONY TRIOXIDE Trade Secret <input type="checkbox"/>		<input type="checkbox"/> Fire <input type="checkbox"/> Sudden Release of Pressure <input type="checkbox"/> Reactivity <input checked="" type="checkbox"/> Immediate (acute) <input checked="" type="checkbox"/> Delayed (chronic)	<input type="checkbox"/> Max. Daily Amount (code) 04 <input type="checkbox"/> Avg. Daily Amount (code) 03 <input type="checkbox"/> No. of Days On-site (days) 365	J	1	4	1/2 in building "A"; 1/2 in building "C"	
<input type="checkbox"/> Check if all of the information for this chemical is identical to the information submitted last year CAS 7778-39-4 Chem. Name ARSENIC ACID SOLUTION 75% Trade Secret <input type="checkbox"/>		<input type="checkbox"/> Fire <input type="checkbox"/> Sudden Release of Pressure <input type="checkbox"/> Reactivity <input checked="" type="checkbox"/> Immediate (acute) <input checked="" type="checkbox"/> Delayed (chronic)	<input type="checkbox"/> Max. Daily Amount (code) 04 <input type="checkbox"/> Avg. Daily Amount (code) 03 <input type="checkbox"/> No. of Days On-site (days) 365	C	1	4	Tank in storage room - west end of plant	
<input type="checkbox"/> Check if all of the information for this chemical is identical to the information submitted last year CAS 513-77-9 Chem. Name BARIUM CARBONATE Trade Secret <input type="checkbox"/>		<input type="checkbox"/> Fire <input type="checkbox"/> Sudden Release of Pressure <input checked="" type="checkbox"/> Reactivity <input type="checkbox"/> Immediate (acute) <input checked="" type="checkbox"/> Delayed (chronic)	<input type="checkbox"/> Max. Daily Amount (code) 04 <input type="checkbox"/> Avg. Daily Amount (code) 04 <input type="checkbox"/> No. of Days On-site (days) 365	J	1	4	Building "A"	

Chemical Description		Physical and Health Hazards					Inventory	Container Type	Pressure	Temperature	Storage Codes and Locations (Non-Confidential)
<input checked="" type="checkbox"/> Check if all of the information for this chemical is identical to the information submitted last year CAS 10022-31-8 Chem. Name BARIUM NITRATE Trade Secret <input type="checkbox"/>		<input type="checkbox"/> Fire <input type="checkbox"/> Sudden Release of Pressure <input checked="" type="checkbox"/> Reactivity <input checked="" type="checkbox"/> Immediate (acute) <input type="checkbox"/> Delayed (chronic)	04 Max. Daily Amount (code)	J	1	4	Building "A"				
<input type="checkbox"/> Check All That Apply <input checked="" type="checkbox"/> Pure <input type="checkbox"/> Mix <input type="checkbox"/> Solid <input type="checkbox"/> Liquid <input type="checkbox"/> Gas <input type="checkbox"/> EHS			03 Avg. Daily Amount (code)								
<input type="checkbox"/> Check All That Apply <input checked="" type="checkbox"/> Pure <input type="checkbox"/> Mix <input type="checkbox"/> Solid <input type="checkbox"/> Liquid <input type="checkbox"/> Gas <input type="checkbox"/> EHS			365 No. of Days On-site (days)								
<input checked="" type="checkbox"/> Check if all of the information for this chemical is identical to the information submitted last year CAS 10043-35-3 Chem. Name BORIC ACID Trade Secret <input type="checkbox"/>		<input type="checkbox"/> Fire <input type="checkbox"/> Sudden Release of Pressure <input checked="" type="checkbox"/> Reactivity <input type="checkbox"/> Immediate (acute) <input checked="" type="checkbox"/> Delayed (chronic)	05 Max. Daily Amount (code)	J	1	4	1/2 in building "A"; 1/2 in building "C"				
<input type="checkbox"/> Check All That Apply <input checked="" type="checkbox"/> Pure <input type="checkbox"/> Mix <input checked="" type="checkbox"/> Solid <input type="checkbox"/> Liquid <input type="checkbox"/> Gas <input type="checkbox"/> EHS			04 Avg. Daily Amount (code)								
<input type="checkbox"/> Check All That Apply <input checked="" type="checkbox"/> Pure <input type="checkbox"/> Mix <input type="checkbox"/> Solid <input type="checkbox"/> Liquid <input type="checkbox"/> Gas <input type="checkbox"/> EHS			365 No. of Days On-site (days)								
<input type="checkbox"/> Check if all of the information for this chemical is identical to the information submitted last year CAS 1310-73-2 Chem. Name CAUSTIC SODA SOLUTION 50% Trade Secret <input type="checkbox"/>		<input type="checkbox"/> Fire <input type="checkbox"/> Sudden Release of Pressure <input type="checkbox"/> Reactivity <input checked="" type="checkbox"/> Immediate (acute) <input type="checkbox"/> Delayed (chronic)	04 Max. Daily Amount (code)	C	1	4	Tank inside building beside nitric acid tanks				
<input type="checkbox"/> Check All That Apply <input type="checkbox"/> Pure <input checked="" type="checkbox"/> Mix <input type="checkbox"/> Solid <input checked="" type="checkbox"/> Liquid <input type="checkbox"/> Gas <input type="checkbox"/> EHS			04 Avg. Daily Amount (code)								
<input type="checkbox"/> Check All That Apply <input type="checkbox"/> Pure <input checked="" type="checkbox"/> Mix <input type="checkbox"/> Solid <input type="checkbox"/> Liquid <input type="checkbox"/> Gas <input type="checkbox"/> EHS			120 No. of Days On-site (days)								
<input type="checkbox"/> Check if all of the information for this chemical is identical to the information submitted last year CAS 526-95-4 Chem. Name GLUCONIC ACID 50% Trade Secret <input type="checkbox"/>		<input type="checkbox"/> Fire <input type="checkbox"/> Sudden Release of Pressure <input type="checkbox"/> Reactivity <input type="checkbox"/> Immediate (acute) <input checked="" type="checkbox"/> Delayed (chronic)	03 Max. Daily Amount (code)	E	1	4	Room "B" of plant				
<input type="checkbox"/> Check All That Apply <input type="checkbox"/> Pure <input checked="" type="checkbox"/> Mix <input type="checkbox"/> Solid <input checked="" type="checkbox"/> Liquid <input type="checkbox"/> Gas <input type="checkbox"/> EHS			03 Avg. Daily Amount (code)								
<input type="checkbox"/> Check All That Apply <input type="checkbox"/> Pure <input checked="" type="checkbox"/> Mix <input type="checkbox"/> Solid <input type="checkbox"/> Liquid <input type="checkbox"/> Gas <input type="checkbox"/> EHS			365 No. of Days On-site (days)								

Chemical Description		Physical and Health Hazards		Inventory	Container Type	Pressure	Temperature	Storage Codes and Locations (Non-Confidential)
<input checked="" type="checkbox"/> Check if all of the information for this chemical is identical to the information submitted last year CAS 7664-39-3 Chem. Name HYDROFLUORIC ACID SOLUTION 70% Check All That Apply: <input type="checkbox"/> Pure <input checked="" type="checkbox"/> Mix <input type="checkbox"/> Solid <input checked="" type="checkbox"/> Liquid <input type="checkbox"/> Gas <input checked="" type="checkbox"/> EHS		<input type="checkbox"/> Fire <input type="checkbox"/> Sudden Release of Pressure <input type="checkbox"/> Reactivity <input checked="" type="checkbox"/> Immediate (acute) <input checked="" type="checkbox"/> Delayed (chronic)		03 Max. Daily Amount (code) 02 Avg. Daily Amount (code) 365 No. of Days On-site (days)	C	1	4	70% in tank in room "D" of plant
<input type="checkbox"/> Check if all of the information for this chemical is identical to the information submitted last year CAS 1317-36-8 Chem. Name LITHARGE (Lead monoxide) Check All That Apply: <input checked="" type="checkbox"/> Pure <input type="checkbox"/> Mix <input checked="" type="checkbox"/> Solid <input type="checkbox"/> Liquid <input type="checkbox"/> Gas <input type="checkbox"/> EHS		<input type="checkbox"/> Fire <input type="checkbox"/> Sudden Release of Pressure <input type="checkbox"/> Reactivity <input checked="" type="checkbox"/> Immediate (acute) <input checked="" type="checkbox"/> Delayed (chronic)		04 Max. Daily Amount (code) 03 Avg. Daily Amount (code) 365 No. of Days On-site (days)	D	1	4	Building "A"
<input checked="" type="checkbox"/> Check if all of the information for this chemical is identical to the information submitted last year CAS 554-13-2 Chem. Name LITHIUM CARBONATE Check All That Apply: <input checked="" type="checkbox"/> Pure <input type="checkbox"/> Mix <input checked="" type="checkbox"/> Solid <input type="checkbox"/> Liquid <input type="checkbox"/> Gas <input type="checkbox"/> EHS		<input type="checkbox"/> Fire <input type="checkbox"/> Sudden Release of Pressure <input type="checkbox"/> Reactivity <input type="checkbox"/> Immediate (acute) <input checked="" type="checkbox"/> Delayed (chronic)		04 Max. Daily Amount (code) 03 Avg. Daily Amount (code) 365 No. of Days On-site (days)	J	1	4	1/2 in building "A"; 1/2 in building "C"
<input type="checkbox"/> Check if all of the information for this chemical is identical to the information submitted last year CAS 1309-42-8 Chem. Name MAGNESIUM HYDROXIDE (60%) Check All That Apply: <input type="checkbox"/> Pure <input checked="" type="checkbox"/> Mix <input type="checkbox"/> Solid <input checked="" type="checkbox"/> Liquid <input type="checkbox"/> Gas <input type="checkbox"/> EHS		<input type="checkbox"/> Fire <input type="checkbox"/> Sudden Release of Pressure <input type="checkbox"/> Reactivity <input checked="" type="checkbox"/> Immediate (acute) <input type="checkbox"/> Delayed (chronic)		04 Max. Daily Amount (code) 04 Avg. Daily Amount (code) 245 No. of Days On-site (days)	C	1	4	Tank inside building beside nitric acid tanks

Chemical Description		Physical and Health Hazards					Inventory	Container Type	Pressure	Temperature	Storage Codes and Locations (Non-Confidential)
<input checked="" type="checkbox"/> Check if all of the information for this chemical is identical to the information submitted last year CAS 1309-48-4 Chem. Name MAGNESIUM OXIDE Trade Secret <input type="checkbox"/>		<input type="checkbox"/> Fire <input type="checkbox"/> Sudden Release of Pressure <input type="checkbox"/> Reactivity <input type="checkbox"/> Immediate (acute) <input checked="" type="checkbox"/> Delayed (chronic)	04 Max. Daily Amount (code)	J	1	4	1/2 in building "A"; 1/2 in building "C"				
Check All That Apply: <input checked="" type="checkbox"/> Pure <input type="checkbox"/> Mix <input type="checkbox"/> Solid <input type="checkbox"/> Liquid <input type="checkbox"/> Gas <input type="checkbox"/> EHS											
<input checked="" type="checkbox"/> Check if all of the information for this chemical is identical to the information submitted last year CAS 7697-37-2 Chem. Name NITRIC ACID 65% Trade Secret <input type="checkbox"/>		<input type="checkbox"/> Fire <input type="checkbox"/> Sudden Release of Pressure <input checked="" type="checkbox"/> Reactivity <input checked="" type="checkbox"/> Immediate (acute) <input type="checkbox"/> Delayed (chronic)	05 Max. Daily Amount (code)	A	1	4	2 dyked tanks (outdoor) located on North				
Check All That Apply: <input type="checkbox"/> Pure <input checked="" type="checkbox"/> Mix <input type="checkbox"/> Solid <input checked="" type="checkbox"/> Liquid <input type="checkbox"/> Gas <input checked="" type="checkbox"/> EHS											
<input checked="" type="checkbox"/> Check if all of the information for this chemical is identical to the information submitted last year CAS 7782-44-7 Chem. Name OXYGEN, {LIQUID OXYGEN} Trade Secret <input type="checkbox"/>		<input type="checkbox"/> Fire <input checked="" type="checkbox"/> Sudden Release of Pressure <input type="checkbox"/> Reactivity <input checked="" type="checkbox"/> Immediate (acute) <input type="checkbox"/> Delayed (chronic)	04 Max. Daily Amount (code)	A	2	7	Outside tank located on East end of plant				
Check All That Apply: <input checked="" type="checkbox"/> Pure <input type="checkbox"/> Mix <input type="checkbox"/> Solid <input checked="" type="checkbox"/> Liquid <input type="checkbox"/> Gas <input type="checkbox"/> EHS											
<input checked="" type="checkbox"/> Check if all of the information for this chemical is identical to the information submitted last year CAS 584-08-7 Chem. Name POTASSIUM CARBONATE Trade Secret <input type="checkbox"/>		<input type="checkbox"/> Fire <input type="checkbox"/> Sudden Release of Pressure <input checked="" type="checkbox"/> Reactivity <input type="checkbox"/> Immediate (acute) <input checked="" type="checkbox"/> Delayed (chronic)	04 Max. Daily Amount (code)	J	1	4	1/2 in building "A"; 1/2 in building "C"				
Check All That Apply: <input checked="" type="checkbox"/> Pure <input type="checkbox"/> Mix <input checked="" type="checkbox"/> Solid <input type="checkbox"/> Liquid <input type="checkbox"/> Gas <input type="checkbox"/> EHS											

Chemical Description		Physical and Health Hazards		Inventory	Container Type	Pressure	Temperature	Storage Codes and Locations (Non-Confidential)
<input checked="" type="checkbox"/> Check if all of the information for this chemical is identical to the information submitted last year CAS 7757-79-1 Trade Secret <input type="checkbox"/> Chem. Name POTASSIUM NITRATE Check All That Apply: <input checked="" type="checkbox"/> Pure <input type="checkbox"/> Mix <input checked="" type="checkbox"/> Solid <input type="checkbox"/> Liquid <input type="checkbox"/> Gas <input type="checkbox"/> EHS		<input type="checkbox"/> Fire <input type="checkbox"/> Sudden Release of Pressure <input type="checkbox"/> Reactivity <input checked="" type="checkbox"/> Immediate (acute) <input checked="" type="checkbox"/> Delayed (chronic)		04 Max. Daily Amount (code) 03 Avg. Daily Amount (code) 365 No. of Days On-site (days)	J	1	4	1/2 in building "A", 1/2 in building "C"
<input type="checkbox"/> Check if all of the information for this chemical is identical to the information submitted last year CAS 74-98-6 Trade Secret <input type="checkbox"/> Chem. Name PROPANE Check All That Apply: <input checked="" type="checkbox"/> Pure <input type="checkbox"/> Mix <input type="checkbox"/> Solid <input checked="" type="checkbox"/> Liquid <input type="checkbox"/> Gas <input type="checkbox"/> EHS		<input checked="" type="checkbox"/> Fire <input checked="" type="checkbox"/> Sudden Release of Pressure <input type="checkbox"/> Reactivity <input checked="" type="checkbox"/> Immediate (acute) <input type="checkbox"/> Delayed (chronic)		04 Max. Daily Amount (code) 03 Avg. Daily Amount (code) 365 No. of Days On-site (days)	A	2	4	3 tanks NE of plant (now empty) 1 small tank on north side of plant
<input checked="" type="checkbox"/> Check if all of the information for this chemical is identical to the information submitted last year CAS 66402-68-4 Trade Secret <input type="checkbox"/> Chem. Name REFRACTORY BRICK Check All That Apply: <input checked="" type="checkbox"/> Pure <input type="checkbox"/> Mix <input checked="" type="checkbox"/> Solid <input type="checkbox"/> Liquid <input type="checkbox"/> Gas <input type="checkbox"/> EHS		<input type="checkbox"/> Fire <input type="checkbox"/> Sudden Release of Pressure <input type="checkbox"/> Reactivity <input type="checkbox"/> Immediate (acute) <input checked="" type="checkbox"/> Delayed (chronic)		05 Max. Daily Amount (code) 05 Avg. Daily Amount (code) 365 No. of Days On-site (days)	R	1	4	1/2 in building "A"; 1/2 in building
<input checked="" type="checkbox"/> Check if all of the information for this chemical is identical to the information submitted last year CAS 14808-60-7 Trade Secret <input type="checkbox"/> Chem. Name SILICON DIOXIDE (SILICA SAND) Check All That Apply: <input checked="" type="checkbox"/> Pure <input type="checkbox"/> Mix <input checked="" type="checkbox"/> Solid <input type="checkbox"/> Liquid <input type="checkbox"/> Gas <input type="checkbox"/> EHS		<input type="checkbox"/> Fire <input type="checkbox"/> Sudden Release of Pressure <input type="checkbox"/> Reactivity <input type="checkbox"/> Immediate (acute) <input checked="" type="checkbox"/> Delayed (chronic)		05 Max. Daily Amount (code) 05 Avg. Daily Amount (code) 365 No. of Days On-site (days)	J	1	4	25% stored in bags in building "A" 50% stored in silos on West end of plant 25% stored in bags in building "C"

Chemical Description		Physical and Health Hazards		Inventory	Container Type	Pressure	Temperature	Storage Codes and Locations (Non-Confidential)
<input type="checkbox"/> Check if all of the information for this chemical is identical to the information submitted last year CAS 497-19-8 Trade Secret <input type="checkbox"/> Chem. Name SODA ASH (SODIUM CARBONATE ANHYDROUS) Check All That Apply: <input checked="" type="checkbox"/> Pure <input type="checkbox"/> Mix <input type="checkbox"/> Solid <input type="checkbox"/> Liquid <input type="checkbox"/> Gas <input type="checkbox"/> EHS		<input type="checkbox"/> Fire <input type="checkbox"/> Sudden Release of Pressure <input checked="" type="checkbox"/> Reactivity <input checked="" type="checkbox"/> Immediate (acute) <input type="checkbox"/> Delayed (chronic)	05 Max. Daily Amount (code) 04 Avg. Daily Amount (code) 365 No. of Days On-site (days)	J	1	4	1/2 in building "A"; 1/2 in building "C"	
<input checked="" type="checkbox"/> Check if all of the information for this chemical is identical to the information submitted last year CAS 7631-99-4 Trade Secret <input type="checkbox"/> Chem. Name SODIUM NITRATE Check All That Apply: <input checked="" type="checkbox"/> Pure <input type="checkbox"/> Mix <input checked="" type="checkbox"/> Solid <input type="checkbox"/> Liquid <input type="checkbox"/> Gas <input type="checkbox"/> EHS		<input type="checkbox"/> Fire <input type="checkbox"/> Sudden Release of Pressure <input checked="" type="checkbox"/> Reactivity <input checked="" type="checkbox"/> Immediate (acute) <input type="checkbox"/> Delayed (chronic)	04 Max. Daily Amount (code) 03 Avg. Daily Amount (code) 365 No. of Days On-site (days)	J	1	4	1/2 in building "A"; 1/2 in building "C"	
<input type="checkbox"/> Check if all of the information for this chemical is identical to the information submitted last year CAS 14808-60-7 Trade Secret <input type="checkbox"/> Chem. Name SPODUMENE CONCENTRATE Check All That Apply: <input type="checkbox"/> Pure <input checked="" type="checkbox"/> Mix <input checked="" type="checkbox"/> Solid <input type="checkbox"/> Liquid <input type="checkbox"/> Gas <input type="checkbox"/> EHS		<input type="checkbox"/> Fire <input type="checkbox"/> Sudden Release of Pressure <input type="checkbox"/> Reactivity <input type="checkbox"/> Immediate (acute) <input checked="" type="checkbox"/> Delayed (chronic)	03 Max. Daily Amount (code) 03 Avg. Daily Amount (code) 365 No. of Days On-site (days)	J	1	4	Building "C"	
<input type="checkbox"/> Check if all of the information for this chemical is identical to the information submitted last year CAS 13463-67-7 Trade Secret <input type="checkbox"/> Chem. Name TITANIUM DIOXIDE (80 - 100%) Check All That Apply: <input type="checkbox"/> Pure <input checked="" type="checkbox"/> Mix <input checked="" type="checkbox"/> Solid <input type="checkbox"/> Liquid <input type="checkbox"/> Gas <input type="checkbox"/> EHS		<input type="checkbox"/> Fire <input type="checkbox"/> Sudden Release of Pressure <input type="checkbox"/> Reactivity <input type="checkbox"/> Immediate (acute) <input checked="" type="checkbox"/> Delayed (chronic)	04 Max. Daily Amount (code) 04 Avg. Daily Amount (code) 365 No. of Days On-site (days)	J	1	4	1/2 in building "A"; 1/2 in building "C"	

Chemical Description		Physical and Health Hazards		Inventory	Container Type	Pressure	Temperature	Storage Codes and Locations (Non-Confidential)
<input checked="" type="checkbox"/> Check if all of the information for this chemical is identical to the information submitted last year CAS 1314-13-2 Chem. Name ZINC OXIDE Trade Secret <input type="checkbox"/>		<input type="checkbox"/> Fire <input type="checkbox"/> Sudden Release of Pressure <input type="checkbox"/> Reactivity <input type="checkbox"/> Immediate (acute) <input checked="" type="checkbox"/> Delayed (chronic)		04 Max. Daily Amount (code)	J	1	4	1/2 in building "A"; 1/2 in building "C"
<input type="checkbox"/> Pure <input type="checkbox"/> Mix <input checked="" type="checkbox"/> Solid <input type="checkbox"/> Liquid <input type="checkbox"/> Gas <input type="checkbox"/> EHS				03 Avg. Daily Amount (code)				
				365 No. of Days On-site (days)				

ATTACHMENT 10

**RECEIVING WATERS INFO./
TIER DETERMINATION/STORET DATA**

Planning Statement for VPDES Permit Application Processing DEQ-SCRO

VPDES	OwnerName	Facility	County
VA0001627	Corning Incorporated, Inc.	Corning Incorporated, Inc.	City of Danville

Outfall #: 001

River Basin: Roanoke River

Receiving Stream: Rutledge Creek

Subbasin: Roanoke River

Watershed Code: L60

River Mile: 3.54

	MGD		MGD
1Q10	0.005	HF 1Q10	0.026
7Q10	0.006	HF7Q10	0.003
30Q5	0.021	HF30Q10	0.041
30Q10	0.009	HM	0.071

0.63 MGD *abg*

Modeling Notes


WQMP Name 9 VAC 25-720-80

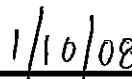
Statement There are no allocations set for this facility.

TMDL ID None

Impairment Cause None

TMDL Due Date


 Amanda B. Gray, Water Planning Engineer



 Date

MEMORANDUM

DEPARTMENT OF ENVIRONMENTAL QUALITY
South Central Regional Office - Water Planning
7705 Timberlake Road Lynchburg, VA 24502 434/582-5120

SUBJECT: Flow Frequency Determination
Corning – Danville - #VA0001627

TO: Kirk Batsel

FROM: Amanda Gray 

DATE: January 10, 2008

COPIES: File

This memo supersedes the July 3, 2003 memo concerning the subject VPDES permit.

The Corning – Danville plant discharges to Rutledge Creek near Stokesland, VA. Stream flow frequencies are required at this site by the permit writer for the purpose of calculating effluent limitations for the VPDES permit. Since there are no new measurements from Fall Creek, the frequencies determined in 2003 remain the same. The 30Q10 and High Flow 30Q10 were calculated to be included in this determination.

The USGS conducted several flow measurements on Fall Creek from 1981 to 1984. The measurements were made at the Route 719 bridge near Danville, VA. The measurements made correlated very well with the same day daily mean values from two continuous record gages; one on Sandy River near Danville, VA (#02074500) and the other on North Mayo River near Spencer, VA (#02070000). The measurements and daily mean values were plotted on a logarithmic graph and a best-fit line was drawn through the data points. The required flow frequencies from the reference gages were used in a regression analysis to determine the flow frequencies at the measurement site. An average of the two resulting values was assigned to the measurement site.

The flow frequencies at the discharge point were determined by using values at the measurement site and adjusting them by proportional drainage areas. The data for the reference gage, the measurement site and the discharge point are presented on the next page.

Sandy River near Danville, Va. #020745000:

Drainage Area: 112 mi²

1Q10 = 14 cfs	High Flow 1Q10 = 38 cfs
7Q10 = 16 cfs	High Flow 7Q10 = 43 cfs
30Q5 = 25 cfs	High Flow 30Q10 = 50 cfs
30Q10 = 20 cfs	Harmonic Mean = 62 cfs

North Mayo River near Spencer, Va. #02076340:

Drainage Area: 108 mi²

1Q10 = 23 cfs	High Flow 1Q10 = 49 cfs
7Q10 = 26 cfs	High Flow 7Q10 = 52 cfs
30Q5 = 29 cfs	High Flow 30Q10 = 62 cfs
30Q10 = 30 cfs	Harmonic Mean = 84 cfs

Fall Creek at Rte 719 bridge, near Danville, Va. #02075020:

Drainage Area: 5.39 mi²

1Q10 = 0.12 cfs	High Flow 1Q10 = 0.63 cfs
7Q10 = 0.16 cfs	High Flow 7Q10 = 0.75 cfs
30Q5 = 0.26 cfs	High Flow 30Q10 = 1.02 cfs
30Q10 = 0.22 cfs	Harmonic Mean = 1.67 cfs

Rutledge Creek at discharge point:

Drainage Area: 0.34 mi²

1Q10 = 0.008 cfs (0.005 MGD)	High Flow 1Q10 = 0.040 cfs (0.026 MGD)
7Q10 = 0.01 cfs (0.006 MGD)	High Flow 7Q10 = 0.047 cfs (0.03 MGD)
30Q5 = 0.033 cfs (0.021 MGD)	High Flow 30Q10 = 0.064 cfs (0.041 MGD)
30Q10 = 0.014 cfs (0.009 MGD)	Harmonic Mean = 0.11 cfs (0.071 MGD)

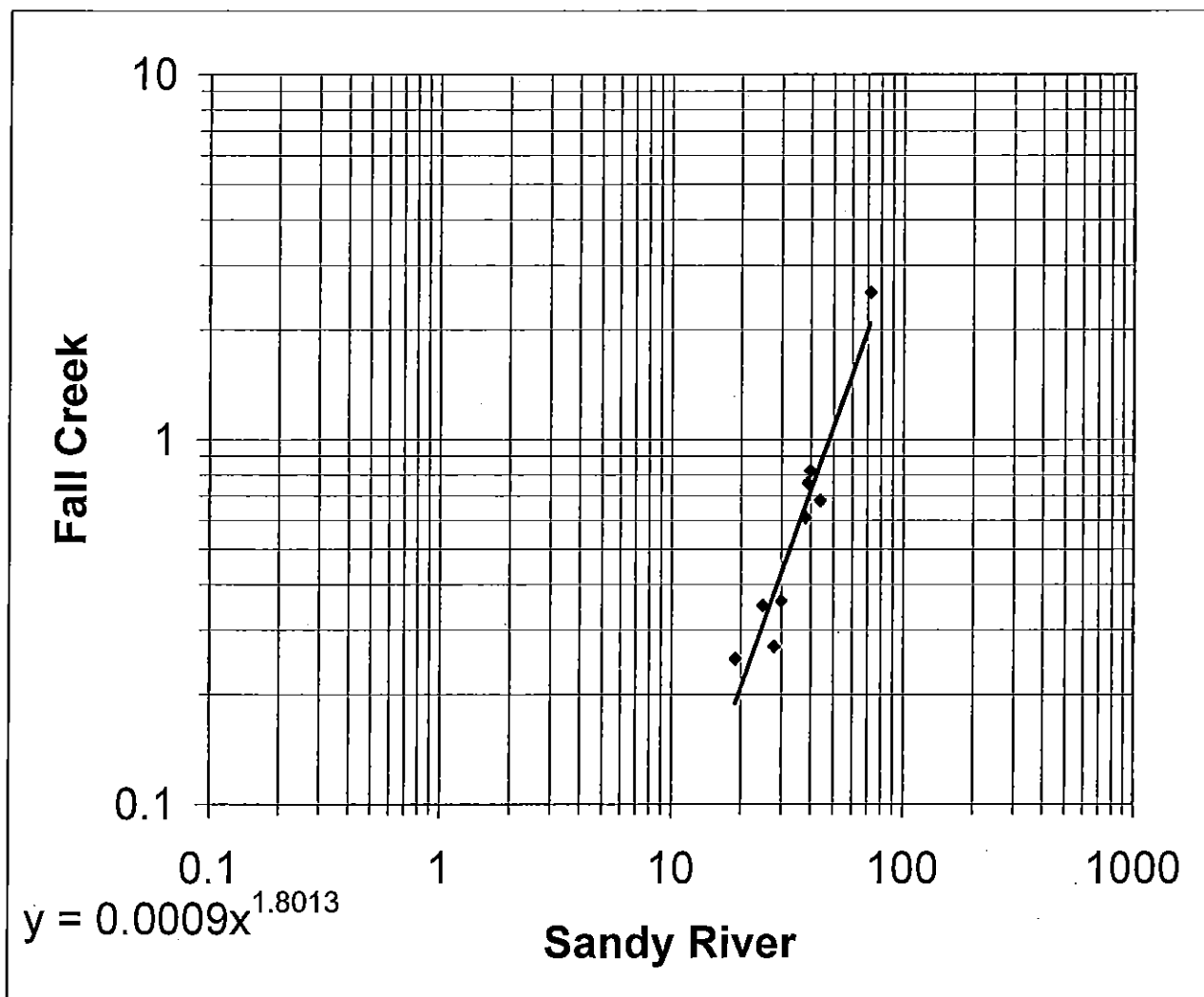
The high flow months are January to April. This analysis assumes there are no significant discharges, withdrawals or springs influencing the flow.

If there are any questions concerning this analysis, please let me know.

Sandy River near Danville, VA (#02074500)

vs Fall Creek at Rte 719 Bridge near Danville, VA (#02075020)

Regression Analysis



Flow Data (cfs)

Date	Sandy River	Fall Creek
8/11/1981	19	0.25
9/15/1981	25	0.35
10/20/1981	28	0.27
7/20/1982	40	0.82
10/19/1982	39	0.76
8/4/1983	38	0.61
9/28/1983	30	0.36
11/8/1983	44	0.68
8/21/1984	72	2.53

SUMMARY OUTPUT

Regression Statistics

Multiple R	0.954481
R Square	0.911033
Adjusted R	0.898324
Standard E	0.225157
Observatio	9

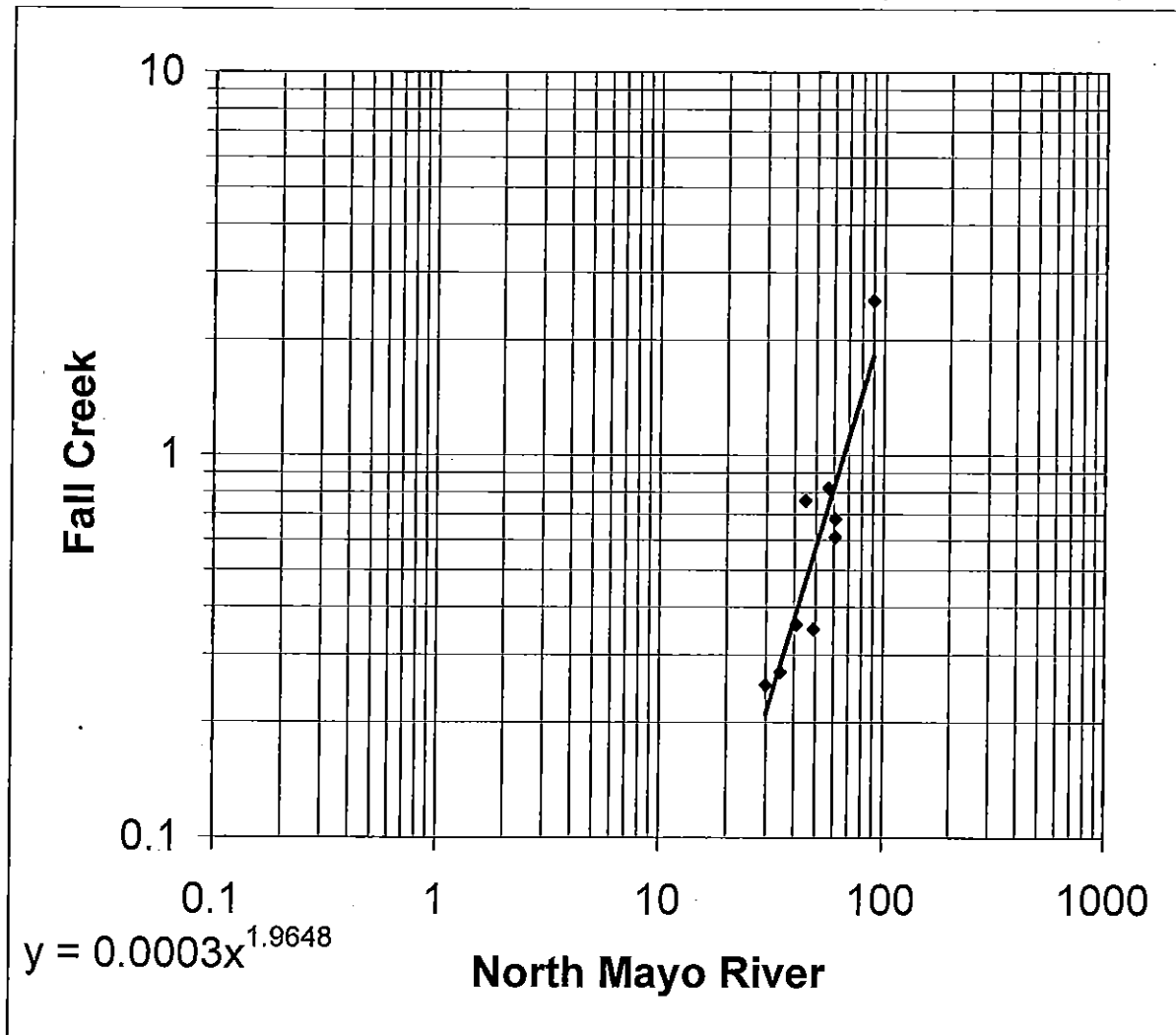
Flow Frequencies (cfs)

Sandy		Fall
14	1Q10	0.104
16	7Q10	0.133
25	30Q5	0.297
20	30Q10	0.199
38	HF 1Q10	0.631
43	HF 7Q10	0.788
50	HF 30Q10	1.034
62	HM	1.524
106	Ann Avg	4.003
112 mi2	DA	5.39 mi2
	Jan-Apr	

North Mayo River near Spencer, VA (#02070000)

vs Fall Creek at Rte 719 Bridge near Danville, VA (#02075020)

Regression Analysis



MEMORANDUM
Department of Environmental Quality
South Central Regional Office

7705 Timberlake Road

Lynchburg, Virginia 24502

Subject: Planning Service Requests for VPDES Permit Application Processing

To: Amanda Gray, Water Planning Engineer

From: Kirk A. Batsel 

Date: January 9, 2008

Copies: Facility Permit Processing File, Planning File

The request for information from the planning section is to be made at the time of sending the reissuance reminder letter to the facility or, for an issuance or modification, at the time of application/modification request receipt.

FACILITY NAME: Corning - Danville

VPDES PERMIT NO. VA0001627

EXPIRATION DATE: December 3, 2008

PERMIT ACTION: Issuance *Reissuance* Modification

PERMIT TYPE: Major Minor Municipal *Industrial* *Storm Water* *TMP* TRE

PERMIT WRITERS: ATTACH THE FOLLOWING MAPS AND INFORMATION

- Topo map with facility location and outfall locations clearly marked (include any proposed outfalls)
- Site diagram for facilities with multiple outfalls
- Description or map showing effluent flow path if not apparent on topo map
- The outfall numbers, latitude, longitude, receiving stream and topo name in the table below (use an additional sheet if there are more outfalls)

Outfall No.	Latitude	Longitude	Receiving Stream	Topo Name
001	36.32.34	-79.27.32	Rutledge Creek	Danville Quad

X Check if a new FLOW FREQUENCY DETERMINATION is being requested.

If checked, provide the previous flow frequency determination memo

 Check if a new or revised WATER QUALITY MODEL is being requested.

If checked, provide the facility flow and the previous limitations page

DATE INFORMATION NEEDED May 30, 2008

ATTACHMENT 11

TABLE A AND TABLE B - CHANGE SHEETS

TABLE A

VPDES PERMIT PROGRAM
Permit Processing Change Sheet

1. Effluent Limits and Monitoring Schedule: (List any changes FROM PREVIOUS PERMIT and give a brief rationale for the changes).

OUTFALL NUMBER	PARAMETER	MONITORING CHANGED FROM / TO	EFFLUENT LIMITS CHANGED FROM / TO	RATIONALE	DATE & INITIAL
001	Oil & Grease	Oil & Grease to TPH		Since the plant utilizes petroleum based lubricants, TPH is a more appropriate indicator parameter. Oil is a common contaminant from industrial operations and is often associated with stormwater runoff. Based on the contributing sources, TPH is an appropriate parameter.	KAB 11/24/08
001	T. Boron, T. Nitrogen, T. Nitrate, & T. Nitrite	None to 1/year		These monitoring parameters were added based on a request from DEQ monitoring staff (see Attachment 7). The requested frequency was 1/year. The intent is to determine potential transport of groundwater via the outfall 001 treatment and/or conveyance system.	KAB 11/24/08
001	Dissolved Pb	1/6 months to 1/Year		The monitoring frequency has been reduced with this issuance based on data generated during the 2003-08 permit term.	KAB 11/24/08
001	Dissolved Zn	1/3 months to 1/month	NL to 51 µg/l (monthly average & max)	Dissolved data generated during the 2003-08 permit term were evaluated as part of this reissuance. This evaluation indicated the need for the subject limitation based on Acute toxicity. The monitoring frequency of 1/month is standard for toxic parameters. This frequency may be eligible for reduction consideration as part of the next reissuance.	KAB 11/24/08

OUTFALL NUMBER	PARAMETER	MONITORING CHANGED FROM / TO	EFFLUENT LIMITS CHANGED FROM / TO	RATIONALE	DATE & INITIAL
001	Acute WET limit	1/3 months to 1/6 months		Monitoring data submitted and evaluated for the last two permit terms indicate that the permittee has reduced acute effluent toxicity on this dry weather discharge. Based on the positive compliance record, a reduction in monitoring frequency was considered appropriate.	KAB 11/24/08
901	Oil & Grease	Oil & Grease to TPH		Since the plant utilizes petroleum based lubricants, TPH is a more appropriate indicator parameter. Oil is a common contaminant from industrial operations and is often associated with stormwater runoff. Based on the contributing sources, TPH is an appropriate parameter.	KAB 11/24/08
901	Dissolved Pb	1/6 months to 1/Year		The monitoring frequency has been reduced with this issuance based on data generated during the 2003-08 permit term.	KAB 11/24/08

OTHER CHANGES FROM:	CHANGED TO:	DATE & INITIAL
WET limitation Condition	Changed to reflect Acute WET testing at 1/6 months	KAB 11/24/08
O&M Manual condition	Updated language	KAB 11/24/08
Compliance Reporting Under Part I.A. condition	Added parameters new with this reissuance (B, N, NO ₃ , NO ₂) and added significant digit language.	KAB 11/24/08
None	Added Materials handling & Storage condition based on materials used and stored onsite.	KAB 11/24/08
Effluent Monitoring Frequencies	Substituted TPH for O&G	KAB 11/24/08
None	Added Permit Application (submittal) Requirement condition	KAB 11/24/08
TMP	Updated 901 reporting schedule to reflect annual testing w/ last test due with reissuance application	KAB 11/24/08
Storm Water Management Conditions	Updated to current language	KAB 11/24/08

TABLE B

VPDES PERMIT PROGRAM
Permit Processing Change Sheet

1. Effluent Limits and Monitoring Schedule: (List any changes MADE DURING PERMIT PROCESS and give a brief rationale for the changes).

OUTFALL NUMBER	PARAMETER CHANGED	MONITORING LIMITS CHANGED FROM / TO	EFFLUENT LIMITS CHANGED FROM / TO	RATIONALE	DATE & INITIAL
001	Dissolved Zinc		Dissolved Zinc to Total Recoverable Zinc	In the process of adding a schedule of compliance for Zinc, it was determined that the subject limit is required to be expressed in the Total Recoverable form.	KAB 1/23/09
OTHER CHANGES FROM:					
CHANGED TO:					
None			Added a 4 year schedule of compliance (Part I.C.) for the new Total Recoverable Zinc limitation. The permittee requested the 4-year schedule after owner review of the proposed draft permit. This request/comment was received by letter dated January 8, 2009 and 1 st received by fax on January 9, 2009, with a hard copy received January 12, 2009. Based on this request, DEQ determined that the request was appropriate, hence the inclusion of the schedule.		

ATTACHMENT 12

NPDES INDUSTRIAL PERMIT RATING WORKSHEET

NPDES Permit Rating Work Sheet

☐ Regular Addition
☐ Discretionary Addition
☐ Score change, but no status change
☐ Deletion

NPDES NO: V A 0 0 0 1 6 2 7

Facility Name:

C O R I N I I N G I I N C I - D A I N V I L L E

City: D A I N V I L L E

Receiving Water: R U T L E D I G E C I R E E K

Reach Number:

Is this facility a steam electric power plant (SIC=4911) with one or more of the following characteristics?

1. Power output 500 MW or greater (not using a cooling pond/lake)
2. A nuclear power plant
3. Cooling water discharge greater than 25% of the receiving stream's 7Q10 flow rate

☐ YES: score is 600 (stop here) ☒ NO (continue)

Is this permit for a municipal separate storm sewer serving a population greater than 100,000?

☐ YES; score is 700 (stop here)
☒ NO (continue)

FACTOR 1: Toxic Pollutant Potential

PCS SIC Code: Primary SIC Code: 3 2 2 9

Other SIC Codes:

Industrial Subcategory Code: 0 0 1 (Code 000 if no subcategory)

Determine the Toxicity potential from Appendix A. Be sure to use the TOTAL toxicity potential column and check one

Toxicity Group	Code	Points	Toxicity Group	Code	Points	Toxicity Group	Code	Points
<input type="checkbox"/> No process waste streams	0	0	<input type="checkbox"/> 3.	3	15	<input type="checkbox"/> 7.	7	35
<input checked="" type="checkbox"/> 1.	1	5	<input type="checkbox"/> 4.	4	20	<input type="checkbox"/> 8.	8	40
<input type="checkbox"/> 2.	2	10	<input type="checkbox"/> 5.	5	25	<input type="checkbox"/> 9.	9	45
			<input type="checkbox"/> 6.	6	30	<input type="checkbox"/> 10.	10	50

Code Number Checked: 0 1

Total Points Factor 1: 5

FACTOR 2: Flow/Stream Flow Volume (Complete Either Section A or Section B; check only one)

Section A--Wastewater Flow Only Considered

Wastewater Type (See Instructions)	Code	Points
Type I: Flow < 5 MGD	<u>11</u>	0
Flow 5 to 10 MGD	<u>12</u>	10
Flow > 10 to 50 MGD	<u>13</u>	20
Flow > 50 MGD	<u>14</u>	30
Type II: Flow < 1 MGD	<u>21</u>	10
Flow 1 to 5 MGD	<u>22</u>	20
Flow > 5 to 10 MGD	<u>23</u>	30
Flow > 10 MGD	<u>24</u>	50
Type III: Flow < 1 MGD	<u>31</u>	0
Flow 1 to 5 MGD	<u>32</u>	10
Flow > 5 to 10 MGD	<u>33</u>	20
Flow > 10 MGD	<u>34</u>	30

Section B--Wastewater and Stream Flow Considered

Wastewater Type (See Instructions)	Percent of Instream Wastewater Concentration at Receiving Stream Low Flow	Code	Points
Type I/III:	< 10%	<u>41</u>	0
	> 10% to < 50%	<u>42</u>	10
	> 50%	<u>43</u>	20
Type II:	< 10%	<u>51</u>	0
	> 10% to < 50%	<u>52</u>	20
	> 50%	<input checked="" type="checkbox"/> 53	30

Code Checked from Section A or B: 5 3

Total Points Factor 2: 3 0

NPDES Permit Rating Work Sheet

NPDES No.: V | A | 0 | 0 | 0 | 1 | 6 | 2 | 7 |

FACTOR 3: Conventional Pollutants

(only when limited by the permit)

A. Oxygen Demanding Pollutant: (check one) ☐ BOD ☐ COD ☐ Other: _____

Permit Limits: (check one)		Code	Points
<input type="checkbox"/> < 100 lbs/day		1	0
<input type="checkbox"/> 100 to 1000 lbs/day		2	5
<input type="checkbox"/> >1000 to 3000 lbs/day		3	15
<input type="checkbox"/> >3000 lbs/day		4	20

NA

Code Checked:

Points Scored:

B. Total Suspended Solids (TSS)

Permit Limits: (check one)		Code	Points
<input type="checkbox"/> < 100 lbs/day		1	0
<input checked="" type="checkbox"/> 100 to 1000 lbs/day		2	5
<input type="checkbox"/> >1000 to 5000 lbs/day		3	15
<input type="checkbox"/> >5000 lbs/day		4	20

Code Checked: 2

Points Scored: 0 5

C. Nitrogen Pollutant: (check one) ☐ Ammonia ☐ Other: _____

Permit Limits: (check one)		Code	Points
<input type="checkbox"/> < 300 lbs/day		1	0
<input type="checkbox"/> 300 to 1000 lbs/day		2	5
<input type="checkbox"/> >1000 to 3000 lbs/day		3	15
<input type="checkbox"/> >3000 lbs/day		4	20

NA

Code Checked:

Points Scored:

Total Points Factor 3: 0 5

FACTOR 4: Public Health Impact

Is there a public drinking water supply located within 50 miles downstream of the effluent discharge (this includes any body of water to which the receiving water is a tributary)? A public drinking water supply may include infiltration galleries, or other methods of conveyance that ultimately get water from the above referenced supply.

☒ YES (if yes, check toxicity potential number below)
☐ NO (if no, go to Factor 5)

South Boston PWS intake point approximately 41 river miles downstream
 Proposed NC intake approximately 15 river miles downstream @ Milton, NC.

Determine the human health toxicity potential from Appendix A. Use the same SIC code and subcategory reference as in Factor 1. (Be sure to use the human health toxicity group column -- check one below)

Toxicity Group	Code	Points	Toxicity Group	Code	Points	Toxicity Group	Code	Points
<input type="checkbox"/> No process waste streams	0	0	<input type="checkbox"/> 3.	3	0	<input type="checkbox"/> 7.	7	15
<input checked="" type="checkbox"/> 1.	1	0	<input type="checkbox"/> 4.	4	0	<input type="checkbox"/> 8.	8	20
<input type="checkbox"/> 2.	2	0	<input type="checkbox"/> 5.	5	5	<input type="checkbox"/> 9.	9	25
			<input type="checkbox"/> 6.	6	10	<input type="checkbox"/> 10.	10	30

Code Number Checked: 0 1

Total Points Factor 4: 0 0

NPDES Permit Rating Work Sheet

NPDES No.: V A 0 0 0 1 6 2 7

FACTOR 5: Water Quality Factors

- A. Is (or will) one or more of the effluent discharge limits based on water quality factors of the receiving stream (rather than technology-based federal effluent guidelines, or technology-based state effluent guidelines), or has a wasteload allocation been assigned to the discharge?

	Code	Points
<u>X</u> Yes	1	10
<u> </u> No	2	0

- B. Is the receiving water in compliance with applicable water quality standards for pollutants that are water quality limited in the permit?

	Code	Points
<u>X</u> Yes	1	0
<u> </u> No	2	5

- C. Does the effluent discharged from this facility exhibit the reasonable potential to violate water quality standards due to whole effluent toxicity?

	Code	Points
<u>X</u> Yes	1	10
<u> </u> No	2	0

Code Number Checked: A 1 B 1 C 1
 Points Factor 5: A 1 0 + B 0 + C 1 0 = 2 0 TOTAL

FACTOR 6: Proximity to Near Coastal Waters

- A. Base Score: Enter flow code here (from Factor 2): 5 3 Enter the multiplication factor that corresponds to the flow code: 0 6

Check appropriate facility HPRI Code (from PCS):

HPRI #	Code	HPRI Score	Flow Code	Multiplication Factor
<u> </u> 1	1	20	11, 31, or 41	0.00
<u> </u> 2	2	0	12, 32, or 42	0.05
<u> </u> 3	3	30	13, 33, or 43	0.10
<u> </u> 4	4	0	14 or 34	0.15
<u> </u> 5	5	20	21 or 51	0.10
<u>X</u> 4	4	0	22 or 52	0.30
			23 or 53	0.60
			24	1.00

Non - Tidal Freshwater Discharge

HPRI code checked: 4

Base Score: (HPRI Score) 0 x (Multiplication Factor) 0.6 = 0 (TOTAL POINTS)

- B. Additional Points--NEP Program

For a facility that has an HPRI code of 3, does the facility discharge to one of the estuaries enrolled in the National Estuary Protection (NEP) program (see Instructions) or the Chesapeake Bay?

	Code	Points
<u> </u> Yes	1	10
<u> </u> No	2	0

- C. Additional Points--Great Lakes Area of Concern

for a facility that has an HPRI code of 5, does the facility discharge any of the pollutants of concern into one of the Great Lakes' 31 areas of concern (see Instructions)

	Code	Points
<u> </u> Yes	1	10
<u> </u> No	2	0

NA

Code Number Checked: A B C
 Points Factor 6: A + B + C = TOTAL

NPDES Permit Rating Work Sheet

NPDES No: V A 0 0 0 1 6 2 7

SCORE SUMMARY

Factor	Description	Total Points
1	Toxic Pollutant Potential	<u>5</u>
2	Flow/Stream flow Volume	<u>30</u>
3	Conventional Pollutants	<u>5</u>
4	Public Health Impacts	<u> </u>
5	Water Quality Factors	<u>20</u>
6	Proximity to Near Coastal Waters	<u> </u>
TOTAL (Factors 1-6)		<u>60</u>

S1. Is the total score equal to or greater than 80? Yes (Facility is a major) X No

S2. If the answer to the above question is no, would you like this facility to be discretionary major?

X No
 Yes (add 500 points to the above score and provide reason below:

Reason:

NEW SCORE: 60

OLD SCORE: 60

Kirk A. Batsel
 Permit Reviewer's Name

(434) 582 - 6204
 Phone Number

October 28, 2008
 Date

ATTACHMENT 13

EPA/VIRGINIA DRAFT PERMIT SUBMISSION CHECKLIST

Part I. Virginia Draft Permit Submission Checklist

In accordance with the MOA established between the Commonwealth of Virginia and the United States Environmental Protection Agency, Region III, the Commonwealth submits the following draft National Pollutant Discharge Elimination System (NPDES) permit for Agency review and concurrence.

Facility Name:	Corning - Danville
NPDES Permit Number:	VA0001627
Permit Writer Name:	Kirk A. Batsel
Date:	November 24, 2008

Major ☐ Minor ☒ Industrial ☒ Municipal ☐

I.A. Draft Permit Package Submittal Includes:	Yes	No	N/A
1. Permit Application?	X		
2. Complete Draft Permit (for renewal or first time permit – entire permit, including boilerplate information)?	X		
3. Copy of Public Notice?		X	
4. Complete Fact Sheet?	X		
5. A Priority Pollutant Screening to determine parameters of concern?	X		
6. A Reasonable Potential analysis showing calculated WQBELs?	X		
7. Dissolved Oxygen calculations?			X
8. Whole Effluent Toxicity Test summary and analysis?	X		
9. Permit Rating Sheet for new or modified industrial facilities?	X		

I.B. Permit/Facility Characteristics	Yes	No	N/A
1. Is this a new, or currently unpermitted facility?		X	
2. Are all permissible outfalls (including combined sewer overflow points, non-process water and storm water) from the facility properly identified and authorized in the permit?	X		
3. Does the fact sheet or permit contain a description of the wastewater treatment process?	X		
4. Does the review of PCS/DMR data for at least the last 3 years indicate significant non-compliance with the existing permit?		X	

I.B. Permit/Facility Characteristics – cont.		Yes	No	N/A
5.	Has there been any change in streamflow characteristics since the last permit was developed?	X		
6.	Does the permit allow the discharge of new or increased loadings of any pollutants?		X	
7.	Does the fact sheet or permit provide a description of the receiving water body(s) to which the facility discharges, including information on low/critical flow conditions and designated/existing uses?	X		
8.	Does the facility discharge to a 303(d) listed water?		X	
8.a.	Has a TMDL been developed and approved by EPA for the impaired water?			X
8.b.	Does the record indicate that the TMDL development is on the State priority list and will most likely be developed within the life of the permit?			X
8.c.	Does the facility discharge a pollutant of concern identified in the TMDL or 303(d) listed water?			X
9.	Have any limits been removed, or are any limits less stringent, than those in the current permit?		X	
10.	Does the permit authorize discharges of storm water?	X		
11.	Has the facility substantially enlarged or altered its operation or substantially increased its flow or production?		X	
12.	Are there any production-based, technology-based effluent limits in the permit?		X	
13.	Do any water quality-based effluent limit calculations differ from the State's standard policies or procedures?		X	
14.	Are any WQBELs based on an interpretation of narrative criteria?	X		
15.	Does the permit incorporate any variances or other exceptions to the State's standards or regulations?		X	
16.	Does the permit contain a compliance schedule for any limit or condition?		X	
17.	Does the permit include appropriate Pretreatment Program requirements?			X
18.	Is there a potential impact to endangered/threatened species or their habitat by the facility's discharge(s)?		X	
19.	Have impacts from the discharge(s) at downstream potable water supplies been evaluated?	X		
20.	Is there any indication that there is significant public interest in the permit action proposed for this facility?		X	
21.	Has previous permit, application, and fact sheet been examined?	X		

Part II NPDES Draft Permit Checklist
Region III NPDES Permit Quality Review Checklist – For Non-Municipals
 (To be completed and included in the record for all non-POTWs)

II.A. Permit Cover Page/Administration	Yes	No	N/A
1. Does the fact sheet or permit describe the physical location of the facility, including latitude and longitude (not necessarily on permit cover page)?	X		
2. Does the permit contain specific authorization-to-discharge information (from where to where, by whom)?	X		

II.B. Effluent Limits – General Elements	Yes	No	N/A
1. Does the fact sheet describe the basis of final limits in the permit (e.g., that a comparison of technology and water quality-based limits was performed, and the most stringent limit selected)?	X		
2. Does the fact sheet discuss whether “antibacksliding” provisions were met for any limits that are less stringent than those in the previous NPDES permit?	X		

II.C. Technology-Based Effluent Limits (Effluent Guidelines & BPJ)	Yes	No	N/A
1. Is the facility subject to a national effluent limitations guideline (ELG)?	X		
1.a. If yes, does the record adequately document the categorization process, including an evaluation of whether the facility is a new source or an existing source?	X		
1.b. If no, does the record indicate that a technology-based analysis based on best Professional Judgement (BPJ) was used for all pollutants of concern discharged at treatable concentrations?			X
2. For all limits developed based on BPJ, does the record indicate that the limits are consistent with the criteria established at 40 CFR 125.3(d)?	X		
3. Does the fact sheet adequately document the calculations used to develop both ELG and /or BPJ technology-based effluent limits?	X		
4. For all limits that are based on production or flow, does the record indicate that the calculations are based on a “reasonable measure of ACTUAL production: for the facility (not design)?			X
5. Does the permit contain “tiered” limits that reflect projected increases in production or flow?		X	
5.a. If yes, does the permit require the facility to notify the permitting authority when alternate levels of production or flow are attained?			X
6. Are technology-based permit limits expressed in appropriate units of measure (e.g., concentration, mass, SU)?			X
7. Are all technology-based limits expressed in terms of both maximum daily, weekly average and/or monthly average limits?			X
8. Are any final limits less stringent than required by applicable effluent limitations guidelines or BPJ?		X	

II.D. Water Quality-Based Effluent Limits		Yes	No	N/A
1.	Does the permit include appropriate limitations consistent with 40 CFR 122.44(d) covering State narrative and numeric criteria for water quality?	X		
2.	Does the record indicate that any WQBELs were derived from a completed and EPA approved TMDL?		X	
3.	Does the fact sheet provide effluent characteristics for each outfall?	X		
4.	Does the fact sheet document that a "reasonable potential" evaluation was performed?	X		
4.a.	If yes, does the fact sheet indicate that the "reasonable potential" evaluation was performed in accordance with the State's approved procedures?	X		
4.b.	Does the fact sheet describe the basis for allowing or disallowing in-stream dilution or a mixing zone?	X		
4.c.	Does the fact sheet present WLA calculation procedures for all pollutants that were found to have "reasonable potential"?	X		
4.d.	Does the fact sheet indicate that the "reasonable potential" and WLA calculations accounted for contributions from upstream sources (e.g., do calculations include ambient/background concentrations where data are available)?	X		
4.e.	Does the permit contain numeric effluent limits for all pollutants for which "reasonable potential" was determined?	X		
5.	Are all final WQBELs in the permit consistent with the justification and/or documentation provided in the fact sheet?	X		
6.	For all final WQBELs, are BOTH long-term (e.g., average monthly) AND short-term (e.g., maximum daily, weekly average, instantaneous) effluent limits established?	X		
7.	Are WQBELs expressed in the permit using appropriate units of measure (e.g., mass concentration)?	X		
8.	Does the fact sheet indicate that an "antidegradation" review was performed in accordance with the State's approved antidegradation policy?	X		

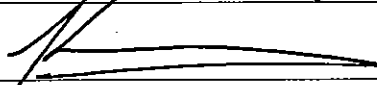
II.E. Monitoring and Reporting Requirements		Yes	No	N/A
1.	Does the permit require at least annual monitoring for all limited parameters?	X		
1.a.	If no, does the fact sheet indicate that the facility applied for and was granted a monitoring waiver, AND, does the permit specifically incorporate his waiver?			X
2.	Does the permit identify the physical location where monitoring is to be performed for each outfall?	X		
3.	Does the permit require testing for Whole Effluent Toxicity in accordance with the State's standard practices?	X		

II.F. Special Conditions	Yes	No	N/A
1. Does the permit require development and implementation of a Best Management Practices (BMP) plan or site-specific BMPs?	X		
1.a. If yes, does the permit adequately incorporate and require compliance with the BMPs?	X		
2. If the permit contains compliance schedule(s), are they consistent with statutory and regulatory deadlines and requirements?			X
3. Are other special conditions (e.g., ambient sampling, mixing studies, TIE/TRE, BMPs, special studies) consistent with CWA and NPDES regulations?	X		

II.G. Standard Conditions	Yes	No	N/A
1. Does the permit contain all 40 CFR 122.41 standard conditions or the State equivalent (or more stringent) conditions?	X		
List of Standard Conditions – 40 CFR 122.41 <ul style="list-style-type: none"> Duty to comply Duty to reapply Need to halt or reduce activity not a defense Duty to mitigate Proper O & M Permit Actions Property rights Duty to provide information Inspections and entry Monitoring and reporting Signatory requirement Reporting requirements <ul style="list-style-type: none"> Planned change Anticipated non-compliance Transfers Monitoring Reports Compliance schedules 24-hour reporting Other non-compliance Bypass Upset 			
2. Does the permit contain the additional standard condition (or the State equivalent or more stringent conditions) for existing non-municipal dischargers regarding pollutant notification levels [40 CFR 122.42(a)]?	X		

Part III. Signature Page

Based on a review of the data and other information submitted by the permit applicant, and the draft permit and other administrative records generated by the Department/Division and/or made available to the Department/Division, the information provided on this checklist is accurate and complete, to the best of my knowledge.

Name	Kirk A. Batsel
Title	Senior Environmental Engineer
Signature	
Date	November 24, 2008

ATTACHMENT 14

CHRONOLOGY SHEET

Chronology

Monday, November 24, 2008

Facility Name: Corning Inc - Danville

VA0001627

<i>Date</i>	<i>Event</i>	<i>Comment</i>
7/27/2007	— Site visit:	Mark Coppage
8/15/2007	— Site Inspection report:	Mark Coppage
1/3/2008	— First Application Reminder Phone Call:	spoke w/ ralph concerning reissuance
1/3/2008	— Reissuance letter mailed:	sent to Ralph Nuckols via email
5/2/2008	— Second Application Reminder Phone Call:	spoke w/ Ralph about application (2F) sampling requirements, answering questions & ok'ing use of grab samples for acute tox and sulfites in SW
6/6/2008	— App complete letter sent to permittee:	via email and US Mail
6/6/2008	— App sent to State Agencies (list in comment field):	to VDH via US Mail
6/6/2008	— Application Administratively complete:	
6/6/2008	— Application received at RO 1st time:	via Fed Ex
6/6/2008	— Reissuance application due:	
6/13/2008	— Application totally / technically complete:	
6/13/2008	— Comments rec'd from State Agencies on App:	VDH comments rec'd. No Intake w/in 15 miles. No objection.
11/24/2008	— Draft permit developed:	submitted to K. Foster for review
12/3/2008	— Old expiration date:	
12/3/2008	— Permit expires:	